WX-C570R

SERVICE MANUAL

AEP Model
UK Model

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
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CD Section	Model Name Using Similar Mechanism	CDX-3180
	CD Drive Mechanism Type	MG-363X-121
	Optical Pick-up Name	KSS-521A
TC Section	Model Name Using Similar Mechanism	XR-2800
	Tape Transport Mechanism Type	MG-25E-136

SPECIFICATIONS

CD player section

Signal-to-noise ratio	96 dB
Frequency response	10 - 20,000 Hz
Wow and flutter	Below measurable limit

Cassette player section

Tape track	4-track 2-channel stereo
Wow and flutter	0.08 % (WRMS)
Frequency response	30 - 18,000 Hz
Signal-to-noise ratio	

Cassette type	Dolby B NR	Dolby NR off
TYPE II, IV	67 dB	58 dB
TYPE I	64 dB	55 dB

Tuner section

FM

Tuning range	87.5 - 108.0 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	9 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7% (stereo), 0.4% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 - 15,000 Hz

MW/LW

Tuning range	MW : 531 - 1,602 kHz LW : 153 - 281 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	MW : 30 µV LW : 50 µV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 - 8 ohms
Maximum power output	35 W × 4 (at 4 ohms)

– Continued on next page –

CHANGER CONTROL AUDIO MASTER

MICROFILM

SONY®

General

Outputs	Line outputs (2) Power antenna relay control lead Power amplifier control lead Telephone ATT control lead
Tone controls	Bass ± 10 dB at 100 Hz Treble ± 10 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 100 × 173 mm (w/h/d)
Mounting dimension	Approx. 178 × 100 × 155 mm (w/h/d)
Mass	Approx. 2.2 kg
Supplied accessories	Parts for installation and connections (1 set) Decoy cover (1) Labels for optional rotary commander (2)

Design and specifications are subject to change without notice.

SERVICE NOTE

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

NOTES ON PICK-UP FLEXIBLE BOARD

The pick-up flexible board in this set is secured to the optical pick-up with an adhesive tape. Once the tape is removed, an adhering force becomes weak, and it cannot be reused.
Therefore, if the optical pick-up is replaced, replace also the pick-up flexible board with a new one.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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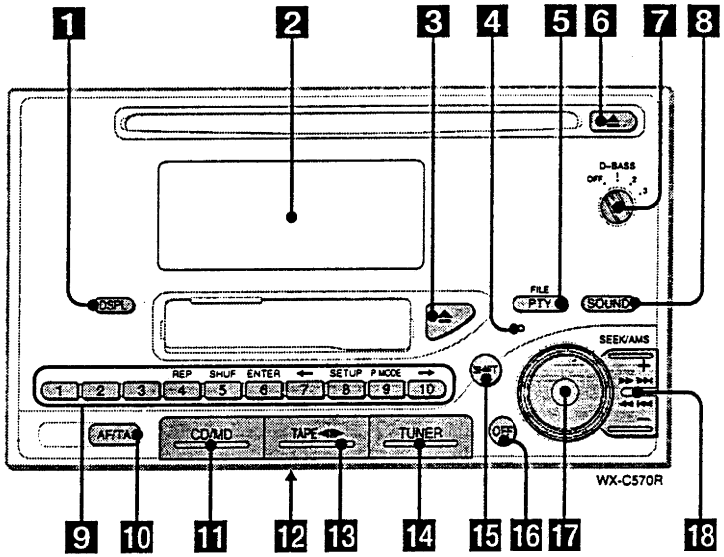
Location of controls



Refer to the pages for details.

1 DSPL (display mode change) button 8, 10, 13, 14, 21, 22, 24

2 Display window

3 ⏏ (eject for tape) button 9

4 Reset button 6

5 PTY/FILE button
RDS programme 17
Disc Memo 23, 24

6 ⏏ (eject for CD) button 7

7 D-BASS dial 21

8 SOUND button 20

9 During radio reception:
Number buttons 12, 15, 16
During CD/MD playback:
Direct disc selection buttons 22

10 AF/TA button 14, 15, 16

11 CD/MD (disc play•CD/MD changer select) button 7, 21, 24

12 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the Installation/Connections manual.

13 TAPE/◄II► (playback/transport direction change) button 9, 10

14 TUNER button 11, 12

15 SHIFT button
P MODE 8, 11, 12, 13, 15, 16, 22, 24, 25
REP 9, 10, 22
SET UP 6, 18, 20
SHUF 9, 23

16 OFF button 7, 9

17 Dial (volume/bass/treble/left-right/front-rear control) 6, 20, 23

18 SEEK/AMS (seek/Automatic Music Sensor/manual search) button 8, 10, 12, 14, 17, 22, 24

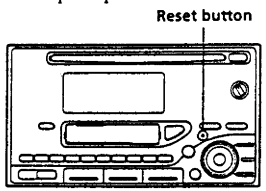
SECTION 1
GENERAL

This section extracted from instruction manual.

Getting Started

Resetting the unit

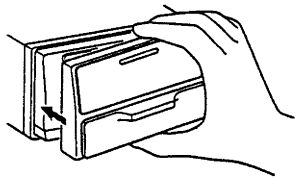
Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Press the reset button with a pointed object, such as a ball-point pen.



Notes
- *Pressing the reset button will erase the clock and some memorized functions.*
- *When you connect the power supply cord to the unit or reset the unit, wait for about 10 seconds before you insert a disc. If you insert a disc within these 10 seconds, the unit will not be reset, and you will have to press the reset button again.*

Using the decoy cover

To deter theft of this unit, use the decoy black ashtray cover when not using your car.



Note
If the unit does not extend 6 mm from the dash panel, you may not be able to use the decoy cover.

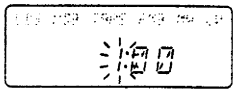
Setting the clock

The clock uses a 24-hour digital indication.

Example: Set the clock to 10:08

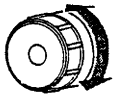
1 Press (SHIFT), then press (8) (SET UP).

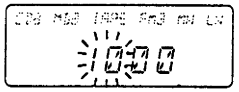
❶ Press (10) (→).



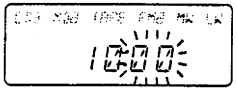
The hour digit flashes.

❷ Set the hour.



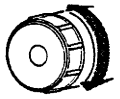


❸ Press (10) (→).

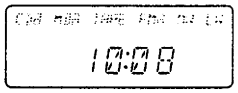


The minute digits flash.

❹ Set the minute.



2 Press (SHIFT).



The clock starts.

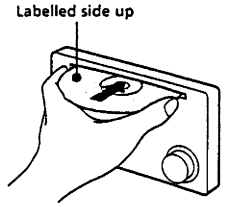
3 Press (SHIFT).
After the mode setting is complete, the display goes back to normal playback mode.

Note
If the POWER SELECT switch on the bottom of the unit is set to the ⓑ position, turn the power on first, then set the clock.

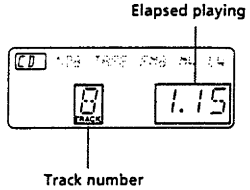
CD Player

Listening to a CD

Simply insert the CD.
Playback starts automatically.



If a CD is already inserted, press (CD/MD) repeatedly until "CD" appears.



To	Press
Stop playback	⏏ or (OFF)
Eject the CD	⏏

Notes
- *To play back an 8cm CD, use the optional Sony compact disc single adapter (CSA-8).*
- *If you cannot insert a CD when the POWER SELECT switch is set to ⓑ position, try turning on the power to the radio or cassette first.*
- *If you leave the disc in the insertion slot for more than 15 seconds after pressing ⏏, the disc will reinsert automatically to protect the disc.*

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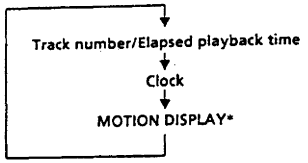
Getting Started/CD Player

Changing the displayed items

Each time you press (DSPL), the item changes as follows:



** All the items above are scrolled in the display one by one in order.*

Locating a specific track
— Automatic Music Sensor (AMS)

During playback, press either side of (SEEK/AMS) momentarily.

To locate succeeding tracks

To locate preceding tracks

Locating a specific point in a track
— Manual Search

During playback, press and hold either side of (SEEK/AMS). Release the button when you have found the desired point.

To search forward

To search backward

Note

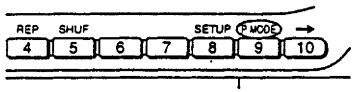
If "└ └ └ └" or "┐ ┐ ┐ ┐" appears in the display, that means you have reached the beginning or the end of the disc and you cannot go any further.

Playing a CD in various modes

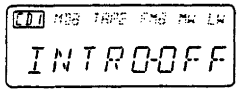
You can play CDs in various modes:
- INTRO (Intro Scan) lets you play the first 10 seconds of all the tracks.
- REP(Repeat Play) repeats the current track.
- SHUF (Shuffle Play) plays all the tracks in random order.

Searching for the desired track
— Intro scan

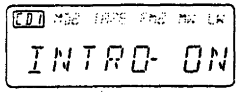
1 During playback, press (SHIFT).
Every time you press (SHIFT), only the items you can select light up.



2 Press (9) (P MODE) repeatedly until "INTRO" appears.



3 Press (10) (→) to select "INTRO-ON".



Intro Scan starts.

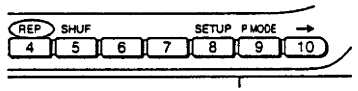
4 Press (SHIFT).

To go back to normal playback mode, select "INTRO-OFF" in step 3 above.

Playing tracks repeatedly
— Repeat Play

1 During playback, press (SHIFT).

2 Press (4) (REP) repeatedly until "REP-1" appears.



Repeat Play starts.

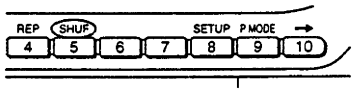
3 Press (SHIFT).

To go back to normal playback mode, select "REP-OFF" in step 2 above.

Playing tracks in random order
— Shuffle Play

1 During playback, press (SHIFT).

2 Press (5) (SHUF) repeatedly until "SHUF-1" appears.



Shuffle Play starts.

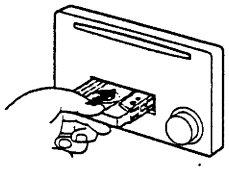
3 Press (SHIFT).

To go back to normal playback mode, select "SHUF-OFF" in step 2 above.

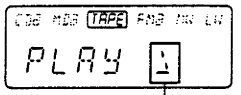
Cassette Player

Listening to a tape

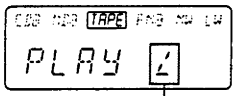
Insert a cassette.
Playback will start automatically.



If a cassette is already inserted, press (TAPE) (◄II►) until "FWD" or "REV" appears to start playback.



The side facing up is played.



The side facing down is played.

Tip

To change the tape transport direction, press (TAPE) (◄II►) again during tape playback.

To	Press
Stop playback	(OFF)
Eject the cassette	⏏

Fast-winding the tape

During playback, press and hold either side of (SEEK/AMS). Release the button when you have found the desired point.

Fast-forward

Rewind

To start playback during fast-forwarding or rewinding, press (TAPE) (◀I▶).

Locating the beginning of a track
— Automatic Music Sensor (AMS)

You can skip up to nine tracks at one time.

During playback, press either side of (SEEK/AMS) momentarily.

To locate the succeeding tracks

To locate the preceding tracks

Note
The AMS function may not work when :
— the blanks between tracks are shorter than four seconds.
— there is noise between tracks.
— there are long sections of low volume or quiet sections.

Changing the displayed items

Each time you press (DSPL) during tape playback, the display changes as follows:

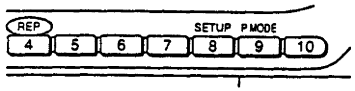
Tape playback → Clock → Frequency*1 ← MOTION DISPLAY*2 ←

*1 *While the ATA function is activated.*
*2 *All the items above are scrolled in the display one by one in order.*

Playing tracks repeatedly
— Repeat play

You can repeat play the current track.

1 During playback press (SHIFT).
Every time you press (SHIFT), only the items you can select light up.



2 Press (4) (REP) repeatedly until "REP-ON" appears.
Repeat play starts.

3 Press (SHIFT).

To go back to the normal playback mode, select "REP-OFF" in step 2 above.

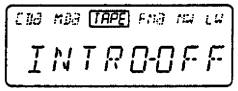
Playing a tape in various modes

You can play the tape in various modes:
- INTRO (Intro Scan) lets you play the first 10 seconds of all the tracks.
- NR (Dolby NR) lets you select the Dolby* NR B system.
- METAL plays CrO_2 or metal tape.
- BLSKP (Blank Skip) skips blanks longer than eight seconds.
- ATA (Automatic Tuner Activation) turns on the tuner automatically while fast-winding the tape.

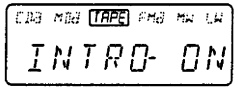
* *Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.*

1 Press (SHIFT), then press (9) (P MODE) repeatedly until the desired play mode appears.
Each time you press (9) (P MODE), the item changes as follows:

INTRO → NR → METAL → BLSKP → ATA



2 Press (10) (→) to select the desired play mode setting (for example: ON or OFF).



Playback starts.

3 Press (SHIFT).

To go back to the normal playback mode, select "OFF" in step 2 above.

Radio

Memorizing stations automatically
— Best Tuning Memory (BTM)

The unit selects the stations with the strongest signals and memorizes them in the order of their frequencies. You can store up to 10 stations on each band (FM1, FM2, MW and LW).

Caution
When tuning in stations while driving, use Best Tuning Memory to prevent accidents.

1 Press (TUNER) repeatedly to select the band.
Each time you press (TUNER), the band changes as follows:

FM1 → FM2 → MW → LW

2 Press (SHIFT), then press (9) (P MODE) repeatedly until "B.T.M" appears.

3 Press (10) (→).
The unit stores stations in the order of their frequencies on the number buttons.
A beep sound and the setting is stored.

4 Press (SHIFT).

Notes
- *The unit does not store stations with weak signals. If only a few stations are received, some number buttons will retain their former setting.*
- *When a number is indicated in the display, the unit starts storing stations from the one currently displayed.*

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EN

Cassette Player/Radio

Memorizing only the desired stations

You can store up to 10 stations on each band in the order of your choice.

1 **Press (TUNER) repeatedly to select the band (FM1, FM2, MW or LW).**

2 **Press either side of (SEEK/AMS) to tune in the station you want to store on the number button.**

3 **Keep the desired number button (1 to 10) pressed for two seconds until "MEM" appears.**
The number button indication appears in the display.

Note
If you try to store another station on the same number button, the previously stored station will be erased.

Receiving the memorized stations

1 **Press (TUNER) repeatedly to select the band (FM1, FM2, MW or LW).**

2 **Press the number button (1 to 10) momentarily where the desired station is stored.**

If you cannot tune in a preset station

Press either side of (SEEK/AMS) momentarily to search for the station (automatic tuning).
Scanning stops when the unit receives a station. Press either side of (SEEK/AMS) repeatedly until the desired station is received.

Note
If the automatic tuning stops too frequently, press (SHIFT), then press 9 (P MODE) repeatedly until "LOCAL" (local seek mode) is displayed. Then press 10 (→) to select "LOCAL-ON". Press (SHIFT). Only the stations with relatively strong signals will be tuned in.

Tip
If you know the frequency of the station you want to listen to, press and hold either side of (SEEK/AMS) for two seconds until the desired frequency appears (manual tuning).

If FM stereo reception is poor — Monaural Mode

1 **Press (SHIFT), then press 9 (P MODE) repeatedly until "MONO" appears.**

2 **Press 10 (→) repeatedly until "MONO-ON" appears.**
The sound improves, but becomes monaural ("ST" disappears).

3 **Press (SHIFT).**

To go back to normal mode, select "MONO-OFF" in step 2 above.

Changing the displayed items

Each time you press (DSPL), the item changes as follows:

Frequency (Station Name)*1 → Clock → MOTION DISPLAY*2 → Frequency (Station Name)*1

*1 *When you tune in an FM station that transmits RDS data, the station name appears.*
*2 *All the items above are scrolled in the display one by one in order.*

RDS

Overview of the RDS function

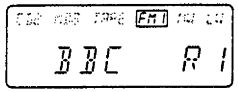
Radio Data System (RDS) is a broadcasting service that allows FM stations to send additional digital information along with the regular radio programme signal. Your car stereo offers you a variety of services. Here are just a few: re-tuning the same programme automatically, listening to traffic announcements and locating a station by programme type.

Notes
- *Depending on the country or region, not all of the RDS functions are available.*
- *RDS may not work properly if the signal strength is weak or if the station you are tuned to is not transmitting RDS data.*

Displaying the station name

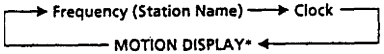
The name of the current station lights up in the display.

Select an FM station (page 11).
When you tune in an FM station that transmits RDS data, the station name appears in the display.



Changing the displayed items

Each time you press (DSPL), the item changes as follows:



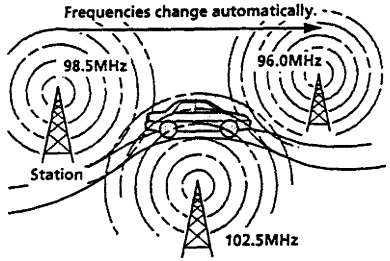
** All the items above are scrolled in the display one by one in order.*

Note
"NO NAME" appears if the received station does not transmit RDS data.

Re-tuning the same programme automatically

— Alternative Frequencies (AF)

The Alternative Frequencies (AF) function automatically selects and re-tunes the station with the strongest signal in a network. By using this function, you can continuously listen to the same programme during a long-distance drive without having to re-tune the station manually.



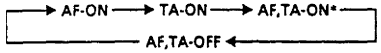
1 Select an FM station (page 11).

2 Press (AF/TA) repeatedly until "AF-ON" appears.
The unit starts searching for an alternative station with a stronger signal in the same network.

Note
When there is no alternative station in the area and you do not need to search for an alternative station, turn the AF function off by pressing (AF/TA) repeatedly until "AF,TA-OFF" appears.

Changing the displayed items

Each time you press (AF/TA), the item changes as follows:



** Select this to turn on both the AF and TA functions.*

Notes
- *"NO AF" and the station name flash alternately, if the unit cannot find an alternative station in the network.*
- *If the station name starts flashing after selecting a station with the AF function on, this indicates that no alternative frequency is available. Press (SEEK/AMS) while the station name is flashing (within eight seconds). The unit starts searching for another frequency with the same PI (Programme Identification) data ("PI SEEK" appears and no sound is heard). If the unit cannot find another frequency, "NO PI" appears, and the unit returns to the originally selected frequency.*

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Listening to a regional programme

The "REG-ON" (regional on) function lets you stay tuned to a regional programme without being switched to another regional station. (Note that you must turn the AF function on.) The unit is factory preset to "REG-ON," but if you want to turn off the function, do the following.

1 Press (SHIFT), then press (9) (P MODE) repeatedly until "REG" appears.

2 Press (10) (→) repeatedly until "REG-OFF" appears.

3 Press (SHIFT).
Note that selecting "REG-OFF" might cause the unit to switch to another regional station within the same network.

To go back to regional on, select "REG-ON" in step 2 above.

Note
This function does not work in the United Kingdom and in some other areas.

Local Link function (United Kingdom only)

The Local Link function lets you select other local stations in the area, even though they are not stored on your number buttons.

1 Press a number button that has a local station stored on it.

2 Within five seconds, press the number button of the local station again.

3 Repeat this procedure until the desired local station is received.

Listening to traffic announcements

The Traffic Announcement (TA) and Traffic Programme (TP) data let you automatically tune in an FM station is broadcasting traffic announcements even though you are listening to other programme sources.

Press (AF/TA) repeatedly until "TA-ON" or "AF,TA-ON" appears.
The unit starts searching for traffic information stations. "TP" appears in the display when the unit finds a station broadcasting traffic announcements. When the traffic announcement starts, "TA" flashes. The flashing stops when the traffic announcement is over.

Tip
If the traffic announcement starts while you are listening to another programme source, the unit automatically switches to the announcement and goes back to the original source when the announcement is over.

Notes
- *"NO TP" flashes for five seconds if the received station does not broadcast traffic announcements. Then, the unit starts searching for a station that broadcasts traffic announcements.*
- *When "EON" appears with "TP" in the display, the current station makes use of broadcast traffic announcement of other stations in the same network.*

EN

RDS

To cancel the current traffic announcement

Press (AF/TA) momentarily.
To cancel all traffic announcements, turn off the function by pressing (AF/TA) until "AF,TA-OFF" appears.

Tip
You can also cancel the traffic announcements by pressing (TUNER) on the master unit or (SOURCE) on the optional rotary commander RM-X4S.

Presetting the volume of traffic announcements

You can preset the volume level of the traffic announcements beforehand so you won't miss the announcement. When a traffic announcement starts, the volume will be automatically adjusted to the preset level.

1 Select the desired volume level.

2 Press (AF/TA) for two seconds.
"TA" appears and the setting is stored.

Receiving emergency announcements

If an emergency announcement comes in while you are listening to the radio, the programme will be automatically switched to the announcement. If you are listening to a source other than the radio, the emergency announcements will be heard if you set AF or TA to on. The unit will then automatically switch to these announcements no matter what you are listening to at the time.

Presetting the RDS stations with the AF and TA data

When you preset RDS stations, the unit stores each station's data as well as its frequency, so you don't have to turn on the AF or TA function every time you tune in the preset station. You can select a different setting (AF, TA, or both) for individual preset stations, or the same setting for all preset stations.

Presetting the same setting for all preset stations

1 Select an FM band (page 11).

2 Press (AF/TA) repeatedly to select either "AF-ON", "TA-ON" or "AF,TA-ON" (for both AF and TA functions).
Note that selecting "AF,TA-OFF" stores not only RDS stations, but also non-RDS stations.

3 Press (SHIFT), then press (9) (P MODE) repeatedly until "B.T.M" appears.

4 Press (10) (→).

5 Press (SHIFT).

Presetting different settings for each preset station

1 Select an FM band, and tune in the desired station (page 12).

2 Press (AF/TA) repeatedly to select either "AF-ON", "TA-ON" or "AF,TA-ON" (for both AF and TA functions).

3 Press the desired number button until "MEM" appears.
Repeat from step 1 to preset other stations.

Tip
If you want to change the AF and/or TA setting after you tuned in the preset station, you can do so by turning the AF or TA function on or off.

Locating a station by programme type

You can locate the station you want by selecting one of the programme types shown below.

Programme types	Display
News	NEWS
Current Affairs	AFFAIRS
Information	INFO
Sports	SPORT
Education	EDUCATE
Drama	DRAMA
Culture	CULTURE
Science	SCIENCE
Varied	VARIED
Popular Music	POP M
Rock Music	ROCK M
Middle of the Road Music	M.O.R. M
Light Classical	LIGHT M
Classical	CLASSICS
Other Music Type	OTHER M
Weather	WEATHER
Finance	FINANCE
Children's programmes	CHILDREN
Social Affairs	SOCIAL A
Religion	RELIGION
Phone In	PHONE IN
Travel	TRAVEL
Leisure	LEISURE
Jazz Music	JAZZ
Country Music	COUNTRY
National Music	NATION M
Oldies Music	OLDIES
Folk Music	FOLK M
Documentary	DOCUMENT
Not specified	NONE

Note
You cannot use this function in some countries where no PTY (Programme Type selection) data is available.

1 Press (PTY/FILE) during FM reception until "PTY" appears.

The current programme type name appears if the station is transmitting the PTY data. "- - - - -" appears if the received station is not an RDS station, or if the RDS data has not been received.

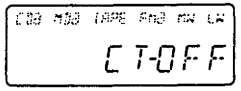
2 Press (PTY/FILE) repeatedly until the desired programme type appears.
The programme types appear in the order shown in the above table. Note that you cannot select "NONE" (Not specified) for searching.

3 Press either side of (SEEK/AMS).
The unit starts searching for a station broadcasting the selected programme type. When the unit finds the programme, the programme type appears again for five seconds.
"NO" and the programme type appear alternately for five seconds if the unit cannot find the programme type. It then returns to the previous station.

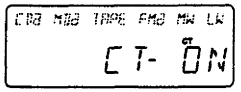
Setting the clock automatically

The CT (Clock Time) data from the RDS transmission sets the clock automatically.

1 **Press (SHIFT), then press (8) (SET UP) repeatedly until "CT" appears.**



2 **Press (10) (→) repeatedly until "CT-ON" appears.**
The clock is set.



3 **Press (SHIFT) to return to the normal display.**

To cancel the CT function

Select "CT-OFF" in step 2 above.

Notes
- *The CT function may not work even though an RDS station is being received.*
- *There might be a difference between the time set by the CT function and the actual time.*

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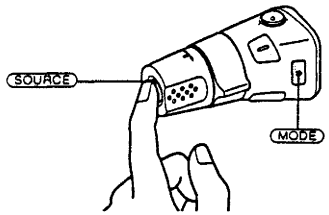
Other Functions

You can connect an optional rotary commander (RM-X4S) with this unit.

Using the rotary commander

The rotary commander works by pressing buttons and/or rotating controls.
You can control an optional CD or MD changer with the rotary commander.

By pressing buttons (the SOURCE and MODE buttons)

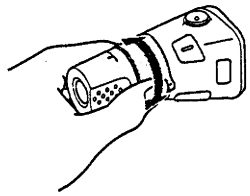


Each time you press (SOURCE), the source changes as follows:
TAPE → TUNER → CD/MD

Pressing (MODE) changes the operation in the following ways;
- **the tape transport direction**
- **Tuner: FM1 → FM2 → MW → LW**
- **CD changer: CD1 → CD2 → ...**
- **MD changer: MD1 → MD2 → ...**

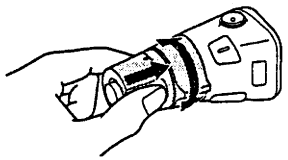
Tip
When the POWER SELECT switch is set to position D, you can turn on this unit by pressing (SOURCE) on the rotary commander.

By rotating the control (the SEEK/AMS control)



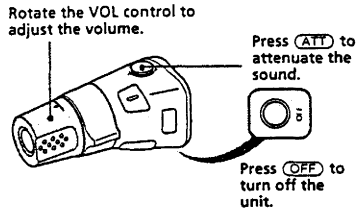
Rotate the control momentarily and release it to:
- Locate the beginnings of tracks on the tape. Rotate and hold the control, then release into fast-wind the tape.
- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in stations automatically. Rotate and hold the control to tune in a specific station.

By pushing in and rotating the control (the PRESET/DISC control)

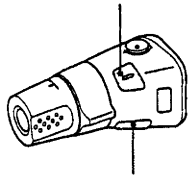


Push in and rotate the control to:
- Receive the stations memorised on the number buttons.
- Change the disc.

Other operations



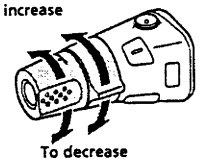
Press (SOUND) to adjust the volume and sound menu.



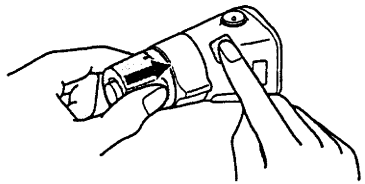
Press (FILE) to:
- **Display the memorised names.**
- **Display the programme type.**

Changing the operative direction

The operative direction of controls is factory-set as in the illustration below.



If you need to mount the rotary commander on the right side of the steering column, you can reverse the operative direction.



Press (SOUND) for two seconds while pushing the VOL control.

Tip
You can control the operative direction of controls with the unit (page 20).

EN

RDS/Other Functions

Adjusting the sound characteristics

You can adjust the bass, treble, balance and fader.
Each source can store the bass and treble levels respectively.

1 Select the item you want to adjust by pressing (SOUND) repeatedly.

VOL (volume) → BAS (bass) →
TRE (treble) → BAL (left-right) →
FAD (front-rear)

2 Adjust the selected item by rotating the dial.
Adjust within three seconds after selecting the item. (After three seconds, the dial functions work as the volume control.)

EN

Attenuating the sound

Press (ATT) on the optional rotary commander.
"ATT-ON" flashes momentarily.

To restore the previous volume level, press (ATT) again.

Tip
The unit decreases the volume automatically when a telephone call comes in (Telephone-ATT function).

Changing the sound and display settings

You can set:
- CLOCK (page 6).
- CT (Clock Time) (page 18).
- DIM to change the brightness of the display.
  —Select "AUTO" to dim the display only when you turn the lights on.
  —Select "ON" to dim the display.
- BEEP to turn on or off the beeps.
- RM (Rotary Remote) to change the operative direction of the controls of the rotary remote.
  —Select "NORM" to use the rotary remote in the factory-set position.
  —Select "REV" when you mount the rotary remote on the right side of the steering column.

1 Press (SHIFT).

2 Press (8) (SET UP) repeatedly until the desired item appears.

Each time you press (8) (SET UP), the item changes as follows:
CLOCK → CT → DIM → BEEP → RM

Note
The displayed item will differ depending on the source.

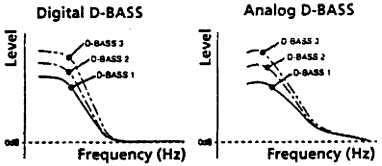
3 Press (10) (→) to select the desired setting (for example: ON or OFF).

4 Press (SHIFT).
After the mode setting is complete, the display goes back to normal playback mode.

Boosting the bass sound — D-bass

You can enjoy clear and powerful bass sound. The D-bass function boosts the low frequency signal with a sharper curve than conventional bass boost.
You can hear the bass line more clearly even if the vocal sound is the same volume. You can emphasize and adjust the bass sound easily with the D-bass control. This effect is similar to the one you get when you use an optional subwoofer system.
Moreover, the Digital D-bass* function creates even sharper and more powerful bass sound than Analog D-bass.

** Digital D-bass is available during CD playback.*



Adjusting the bass curve

Turn the D-BASS dial to adjust the bass level (1, 2 or 3).
"D-BASS" appears in the display.
During CD playback, "DIGITAL D-BASS" appears in the display.

To cancel, turn the dial to the OFF position.

Note
If the bass sound becomes distorted, adjust the D-bass dial or volume control.

With Optional Equipment

CD/MD changer

This unit can control a maximum of three external CD/MD changers in this configuration.

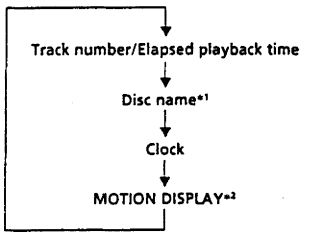
Playing a CD or MD

Press (CD/MD) until the desired changer appears.
CD/MD playback starts.

When a CD/MD changer is connected, all the tracks play from the beginning.

Changing the displayed items

Each time you press (DSPL) during CD or MD playback, the item changes as follows:



**1 If you have not labeled the disc or there is no disc name prerecorded on the MD, "NO NAME" appears in the display.*
**2 All the items above are scrolled in the display one by one in order.*

EN

Displaying the recording date of the current MD

Press (DSPL) for two seconds during MD playback.
The recording date of the track is displayed for about three seconds.

Locating a specific track
— Automatic Music Sensor (AMS)

During playback, press either side of (SEEK/AMS) once for each track you want to skip.

To locate succeeding tracks

To locate preceding tracks

Locating a specific point in a track
— Manual Search

During playback, press and hold either side of (SEEK/AMS). Release the button when you have found the desired point.

To search forward

To search backward

Locating a disc by disc number
— Direct Disc Selection

Press the number button that corresponds with the desired disc number.
The desired disc in the current changer begins playback.

Scanning the tracks
— Intro Scan

You can play the first 10 seconds of all the tracks on the current disc.

1 During playback, press (SHIFT), then press (9) (P MODE) repeatedly until "INTRO" appears.

2 Press (10) (→) to select "INTRO-ON".
Intro Scan starts.

3 Press (SHIFT).

To go back to normal playback mode, select "INTRO-OFF" in step 2 above.

Playing tracks repeatedly
— Repeat Play

You can select:
• REP-1 to repeat a track.
• REP-2 to repeat a disc.

1 During playback, press (SHIFT).

2 Press (4) (REP) repeatedly until the desired setting appears.

→ REP-1 → REP-2 → REP-OFF

Repeat Play starts.

3 Press (SHIFT).

To go back to normal playback mode, select "REP-OFF" in step 2 above.

Playing tracks in random order — Shuffle Play

You can select:
• SHUF-1 to play the tracks on the current disc in random order.
• SHUF-ALL to play the tracks in the current changer in random order.

1 During playback, press (SHIFT).

2 Press (5) (SHUF) repeatedly until the desired setting appears.

→ SHUF-1 → SHUF-ALL → SHUF-OFF

Shuffle Play starts.

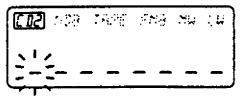
3 Press (SHIFT).

To go back to normal playback mode, select "SHUF-OFF" in step 2 above.

Labeling a CD — Disc Memo
(CD changer with the custom file function)

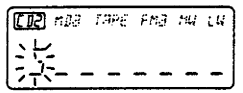
You can label each disc with a personalized name. You can enter up to eight characters for a disc. If you label a CD, you can select the specific tracks for playback (page 24).

1 Play the CD and press (PTY/FILE) for two seconds.



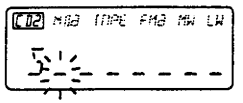
2 Enter the characters.

❶ Rotate the dial clockwise to select the desired characters.
(A → B → C → ··· Z → 0 → 1 → 2 → ··· 9 → + → – → * → / → \ → > → < → . → _)



If you rotate the dial counterclockwise, the characters appear in the reverse order.
If you want to put a blank space between characters, select "_" (under-bar).

❷ Press (10) (→) after locating the desired character.
The flashing cursor moves to the next space.



If you press (7) (←), the flashing cursor moves to the left.

❸ Repeat steps ❶ and ❷ to enter the entire name.

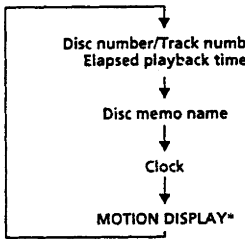
3 To return to normal CD playback mode, press (PTY/FILE) for two seconds.

Tip
To erase/correct a name enter "_" (under-bar) for each character.

Displaying the disc memo name

Press (DSPL) during CD playback.

Each time you press (DSPL) during CD playback, the item changes as follows:



* *All the items above are scrolled in the display one by one in order.*

Erasing the disc memo

1 Press (CD/MD) repeatedly to select the CD changer.

2 Press (PTY/FILE) for two seconds.

3 Press (DSPL) for two seconds.

4 Rotate the dial to select the name you want to erase.

5 Press (6) (ENTER) for two seconds.
The name is erased.
Repeat steps 4 and 5 if you want to erase other names.

6 Press (PTY/FILE) for two seconds.
The unit returns to normal CD playback mode.

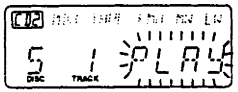
Selecting specific tracks for playback — Bank

(CD changer with the custom file function)

If you label the disc, you can set the unit to skip tracks and play only the tracks you want.

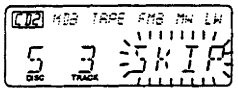
1 Start playing the disc and press (SHIFT). Then press (9) (P MODE) for two seconds.

Bank edit mode



Note
If you have not labeled the disc, the bank edit mode does not appear and the program edit mode appears. To go back to normal playback mode, press (SHIFT).

2 Press either side of (SEEK/AMS) to select the track number you want to skip and press (6) (ENTER).



The indication changes from "PLAY" to "SKIP." If you want to return to "PLAY," press (6) (ENTER) again.

3 Repeat step 2 to set the "PLAY" or "SKIP" mode on all the tracks.

4 Press (9) (P MODE) for two seconds.
The unit returns to normal CD playback mode.

5 Press (SHIFT).

Notes
- *You can set the "PLAY" and "SKIP" mode on up to 24 tracks.*
- *You cannot set the "SKIP" mode on all the tracks.*

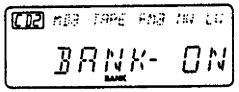
Playing the specific tracks only

You can select:
- BANK-ON to play the tracks with the "PLAY" setting.
- BANK-INV (Inverse) to play the tracks with the "SKIP" setting.

1 During playback, press (SHIFT), then press (9) (P MODE) repeatedly until "BANK" appears.

2 Press (10) (→) to repeatedly until the desired setting appears.

→ BANK-ON → BANK-INV → BANK-OFF



Playback starts from the track following the current one.

3 Press (SHIFT).

To go back to normal playing mode, select "BANK-OFF" in step 2 above.

Connections

Caution

- This unit is designed for negative earth 12 V DC operation only.
- Connect the power connecting cord ④ to the unit and speakers before connecting it to the auxiliary power connector.
- **Run all earth wires to a common earth point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

If your car has no accessory position on the ignition key switch — POWER SELECT switch

The illumination on the front panel is factory set to be turned on even while the unit is not in use. However, this setting may cause some car battery wear **if your car has no accessory position on the ignition key switch.** To avoid this battery wear, **set the POWER SELECT switch located on the bottom of the unit to the ⓑ position, then press the reset button.** The illumination is reset to stay off while the unit is not in use.

Note
The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ⓑ position.

Reset button

When the installation and connections are complete, be sure to press the reset button with a ballpoint pen etc.

Notes of connection example

Note on the control function
Pin 5 of the unit's power connector supplies + 12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation), AF (Alternative Frequency), or the TA (Traffic Announcement) functions.

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Warning
If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord ④ may damage the aerial.

Conexiones

Precauciones

- Esta unidad ha sido diseñada para alimentarse solamente con 12 V CC, negativo a masa.
- Conecte el cable de conexión de alimentación ④ a la unidad y a los altavoces antes de hacerlo al conector de alimentación auxiliar.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Conecte el cable amarillo a un circuito libre del automóvil que tenga una capacidad superior a la del fusible de la unidad. Si conecta esta unidad en serie con otros componentes estereofónicos, el circuito del automóvil al que se encuentran conectados debe tener una capacidad superior a la de la suma de las capacidades de los fusibles de cada componente. Si ningún circuito del automóvil tiene una capacidad tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si el automóvil no dispone de ningún circuito para conectar esta unidad, conéctela a un circuito del automóvil con capacidad superior a la del fusible de la unidad, de forma que si se funde el fusible de ésta, no se interrumpa ningún otro circuito.

Si el automóvil no dispone de posición para accesorios en la llave de encendido

— Selector POWER SELECT

La iluminación del panel frontal ha sido ajustada en fábrica para que esté activada aunque la unidad no se encuentre en funcionamiento. Sin embargo, este ajuste puede provocar cierta descarga de la batería del automóvil **si éste no dispone de posición para accesorios en la llave de encendido.** Para evitar esto, **ponga el selector POWER SELECT, situado en la base de la unidad, en la posición ⓑ y, después, presione el botón de reposición.** La iluminación estará desactivada cuando la unidad no se encuentre en funcionamiento.

Nota
La alarma de precaución del panel frontal no se activará cuando el selector POWER SELECT se encuentre en la posición ⓑ.

Botón de reposición

Cuando finalice la instalación y las conexiones, cerciórese de presionar el botón de reposición con un bolígrafo, etc.

Notas de ejemplo de conexiones

Nota sobre la función de control
El terminal 5 del conector de alimentación de la unidad suministra + 12 V CC al activar el sintonizador o las funciones ATA (Activación automática del sintonizador), AF (Frecuencias alternativas) o TA (Anuncios de tráfico).

Conexión para protección de la memoria
Si conecta el conductor de entrada de alimentación amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque sitúe la llave de encendido en la posición OFF.

Notas sobre la conexión de los altavoces
- *Antes de conectar los altavoces, desconecte la alimentación de la unidad.*
- *Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia máxima admisible adecuada, ya que de lo contrario podría dañarlos.*
- *No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.*
- *No intente conectar los altavoces en paralelo.*
- *No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.*

Advertencia
Si dispone de una antena motorizada sin dispositivo de relé, la conexión de esta unidad con el cable de conexión de alimentación ④ suministrado puede dañar la antena.

Anslutning

Säkerhetsföreskrifter

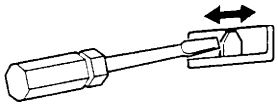
- Denna bilstereo är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Anslut strömkabeln ④ till enheten och högtalarna innan du ansluter den till den yttre strömanslutningen.
- **Dra samtliga jordledningar till en och samma jordningspunkt.**
- Anslut den gula kabeln till en ledig bilkrets som har en säkring med ett högre ampere än enheten. Om du seriekopplar denna enhet med andra stereokomponenter, måste den bilkrets de är kopplade till ha en säkring med en högre ampere än summan av de enskilda komponenternas ampere. Om det inte finns någon bilkrets som har en säkring med ett lika högt ampere som enheten, ska du ansluta enheten direkt till batteriet. Om det inte finns några bilkretsar att ansluta denna enhet till ska du ansluta enheten till en enhet som har en säkring med ett högre ampere än enheten för att förhindra att inga andra kretsar klipps av om säkringen smälter.

Montera bilstereon i en bil vars tändlås inte har något strömläge

— Omkopplaren POWER SELECT

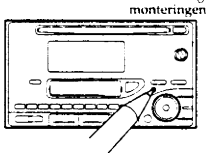
Innan bilstereon levereras från fabriken ställdes belysningen i teckenfönstret in så att den lyser också när bilstereon inte används. Detta kan emellertid orsaka urladdning av batteriet när du använder bilstereon i **en bil, vars tändlås saknar läget ACC (strömläge). Skjut omkopplaren POWER SELECT på bilstereons undersida till läge ⓑ, och tryck sedan på återställningsknappen** för att undvika att bilbatteriet laddas ur. Nu lyser inte längre belysningen i teckenfönstret när bilstereon inte används.

Obsevera
Varningssignalen, som varnar om du inte har tagit loss frontpanelen, ljuder inte när omkopplaren POWER SELECT står i läge ⓑ.



Nollställningsknappen

Kom ihåg att använda en penna eller något annat spetsigt föremål för att trycka på nollställningsknappen när anslutningen och monteringen är klar.



Att observera angående anslutningsexemplen

Att observera angående kontrollfunktionen
Pol 5 i enhetens strömanslutning ger + 12 V likström när du slår på radion eller aktiverar någon av funktionerna ATA (Automatic Tuner Activation), AF (Alternative Frequency) eller TA (Traffic Announcement).

Anslutning för minnesstöd
När du anslutit den gula, ingående strömkabeln försörjs minneskretsen med ström hela tiden, även när tändläset slås ifrån.

Att observera angående högtalarnas anslutning
- *Slå av bilstereon innan du ansluter högtalarna.*
- *Anslut endast högtalare, vars impedans varierar från 4 till 8 ohm och som har tillräcklig effekthanteringskapacitet för att skydda högtalarna mot skador.*
- *Anslut inte något av högtalaruttagen till bilens chassi. Anslut inte heller uttagen på höger högtalare till uttagen på vänster högtalare.*
- *Anslut inte högtalarna parallellt.*
- *Anslut inte aktiva högtalare (med inbyggda effektförstärkare) till bilstereons högtalaruttag, eftersom de kan skada de aktiva högtalarna. Var noga med att bara ansluta passiva högtalare till dessa uttag.*

Varning
Om du har en motorantenn utan relädosa kan antennen skadas om du ansluter enheten med den medföljande strömkabeln ④.

Connexions

Advertência

- Este aparelho foi projectado para funcionar somente com corrente contínua de 12 V com negativo à massa.
- Ligue o cabo de alimentação de corrente ④ ao aparelho e aos alifalantes antes de o ligar ao conector de corrente auxiliar.
- **Ligue todos os fios de terra num ponto de massa comum.**
- Ligue o cabo amarelo a um circuito livre do automóvel com uma capacidade nominal superior à do fusível do aparelho. Se ligar este aparelho em série com outros componentes estéreo, o circuito do automóvel a que estão ligados deve ter uma capacidade nominal superior à soma da capacidade dos fusíveis de cada componente. Se nenhum circuito do automóvel tiver uma capacidade tão alta como a do fusível do aparelho, ligue o aparelho directamente à bateria. Se o automóvel não tiver nenhum circuito disponível para ligação do aparelho, ligue-o a um circuito com uma capacidade superior à do fusível do aparelho para que se o fusível do aparelho se fundir, nenhum dos outros circuitos seja cortado.

Se o seu automóvel não estiver equipado com uma chave de ignição com posição acessórios

— Interruptor POWER SELECT

A iluminação do painel frontal é regulada na fábrica para se manter acesa, mesmo quando o aparelho não estiver ligado. No entanto, esta regulação pode provocar a descarga da bateria **se o aparelho for utilizado em automóveis sem chave de ignição com posição acessórios.** Para evitar a descarga da bateria, **regule o interruptor POWER SELECT, situado na base do aparelho, para a posição ⓑ. Em seguida, carregue no botão de reinicialização.** A iluminação é regulada para ficar apagada enquanto o aparelho estiver desligado.

Nota
O alarme de advertência do painel frontal não é activado quando o interruptor POWER SELECT estiver regulado para a posição ⓑ.

Botão de reinicialização

Quando terminar a instalação e as ligações, não se esqueça de carregar no botão de reinicialização com a ponta de uma caneta, etc.

Notas sobre o exemplo de ligação

Nota sobre a função do controlo
O pino 5 do conector de alimentação do aparelho fornece + 12 V CC quando se liga o sintonizador ou se activam as funções ATA (Activação automática do sintonizador), AF (Frequência alternativa) ou TA (Informações sobre o trânsito).

Ligação para alimentação contínua da memória
Quando ligar o fio amarelo de entrada de alimentação, os circuitos de memória ficarão com alimentação contínua, mesmo se a chave de ignição estiver desligada.

Notas sobre a ligação dos altifalantes
- *Antes de ligar os altifalantes, desligue o aparelho.*
- *Utilize altifalantes com impedância de 4 a 8 ohm, e com capacidade admissível de potência adequada. Caso contrário, os altifalantes poderão sofrer avarias.*
- *Não ligue os terminais do sistema de altifalantes ao chassis do automóvel, e não ligue os terminais do altifalante direito aos terminais do altifalante esquerdo.*
- *Não tente ligar os altifalantes em paralelo.*
- *Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho. Caso o faça, poderá avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar altifalantes passivos a estes terminais.*

Atenção
Se a antena eléctrica não tiver uma caixa de relé, o facto de ligar esta aparelho com a cabo de alimentação ④ fornecido, pode provocar danos na antena.

Connection example/ Ejemplo de conexiones/ Anslutningarna enligt exemplet/ Exemplo de ligações

WARNING
Auxiliary power connectors may vary depending on the car.
Be sure to check the power connection diagram sheet supplied with the unit. Improper connections may damage your car.
If the supplied power connecting cord cannot be used with your car, consult your nearest Sony dealer.

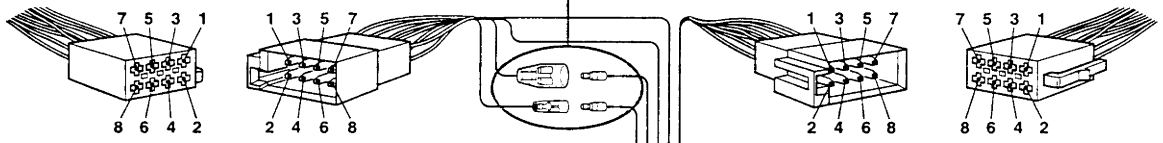
ADVERTENCIA
Los conectores de alimentación auxiliar pueden variar en función del automóvil.
Asegurese de consultar el diagrama de conexión de alimentación suministrado con la unidad. Las conexiones incorrectas pueden dañar el automóvil.
Si no es posible utilizar el cable de conexión de alimentación suministrado con el automóvil, póngase en contacto con el proveedor Sony más próximo.

VARNING
Typen av yttre strömanslutning varierar från bil till bil.
Kontrollera strömanslutningsschemat som medföljer enheten så att du ansluter på rätt sätt. Felaktig anslutning kan skada bilen.
Kontakta närmaste Sony-återförsäljare om den medföljande strömkabeln inte passar till din bil.

ATENÇÃO
Os conectores de corrente auxiliares podem variar de carro para carro.
Não se esqueça de verificar o diagrama de ligação de corrente fornecido com o aparelho.
As ligações mal executadas podem danificar o seu carro.
Se não puder utilizar o cabo de alimentação fornecido com o seu carro, contacte o agente Sony da sua zona.

to a car's auxiliary power connector
a un conector de alimentación auxiliar del automóvil
till bilens yttre strömanslutning
a um conector de alimentação auxiliar do automóvel

to a car's speaker connector
a un conector de altavoces del automóvil
till bilens högtalaranslutning
a um conector de altifalante do automóvel



Yellow Amarillo Gul Amarelo	continuous power supply suministro de alimentación continua kontinuerlig strömförsörjning alimentação de corrente continua	Red Rojo Röd Vermelho	switched power supply suministro de alimentación conmutado switchad strömförsörjning alimentação de corrente comutada
Blue Azul Blå Azul	power aerial control antena eléctrica elektrisk antenn antena eléctrica	Black Negro Svart Preto	earth toma de tierra jord Terra
Orange/ White Naranja/ blanco Orange/ vit Cor de laranja/ branco	switched illumination power supply fuente de alimentacion de iluminación conmutada Switchad strömförsörjning till belysning fonte de alimentação comutada para iluminação		

Positions 1, 2 and 3 do not have pins.
Las posiciones 1, 2 y 3 no disponen de terminals.
Positionerna 1, 2 och 3 saknar stift.
As posições 1, 2 e 3 não têm pinos.

Purple Púrpura	Speaker, Rear, Right Altavoz, trasero, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito	White Blanco Vit Branco	Speaker, Front, Left Altavoz, delantero, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo
Morklila Violeta	Speaker, Rear, Right Altavoz, trasero, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito	–	Speaker, Front, Left Altavoz, delantero, izquierdo Högtalare, främre, vänster Altifalante, Parte da frente, Esquerdo
Grey Gris Grá Cinza	Speaker, Front, Right Altavoz, delantero, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito	Green Verde Grön Verde	Speaker, Rear, Left Altavoz, trasero, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo
	– Speaker, Front, Right Altavoz, delantero, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito		– Speaker, Rear, Left Altavoz, trasero, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquerdo

Negative polarity positions 2, 4, 6, and 8 have striped cords.
Las posiciones de polaridad negativa 2, 4, 6 y 8 tienen cables con raya.
De negativa polpositionerna 2, 4, 6 och 8 har randiga kablar.
As posições 2, 4, 6 e 8 (polaridade negativa) têm cabos às riscas.

To connect to AMP REMOTE IN of the optional power amplifier.
This connection is only for amplifiers. Connecting any other system may damage the unit.
Para conectar a AMP REMOTE IN del amplificador de potencia opcional.
Esta conexión es sólo para amplificadores. La conexión de cualquier otro sistema puede dañar la unidad.
Ansluta till AMP REMOTE IN på den valfria effektförstärkaren.
Denna anslutning gäller endast för högtalare. Om du ansluter något annat system kan enheten skadas.
Para ligação a AMP REMOTE IN do amplificador de potência opcional.
Esta ligação destina-se apenas aos amplificadores. A ligação de qualquer outro sistema pode provocar avarias no aparelho.

AMP REM

Blue/white striped
Con raya azul/blanca
Azul com listras brancas
Blå/vit-randig

Max. supply current 0.3 A
Corriente máx. de alimentación de 0,3 A
Maximal strömtillförsel 0,3 A
Corrente máxima de 0,3 A

Sky blue
Azul celeste
Himmelsblå
Azul celeste

ATT

to the interface cable of a car telehone
al cable de interfaz de un teléfono para automóvil
till biltelefonens gränssnittskabel
ao cabo de interface do telefone para automóvel

RCA pin cord (not supplied)
Cable con terminals RCA (no suministrado)
Kabel med RCA-kontakter (medföljer inte)
Cabo de terminais RCA (não fornecido)

LINE OUT FRONT

LINE OUT REAR

from car aerial*
de la antena del automóvil*
från bilantenn*
à antena do automóvel*

REMOTE IN

BUS AUDIO IN

Fuse (10 A)
Fusible (10 A)
Säkring (10 A)
Fusível (10 A)

BUS CONTROL IN

Rotary Commander RM-X4S
(not supplied)
(no suministrado)
(medföljer inte)
(não fornecido)

RCA pin cord (not supplied)
Cable con clavijas RCA (no suministrado)
Kabel med RCA-kontakter (medföljer inte)
Cabo de terminais RCA (não fornecido)

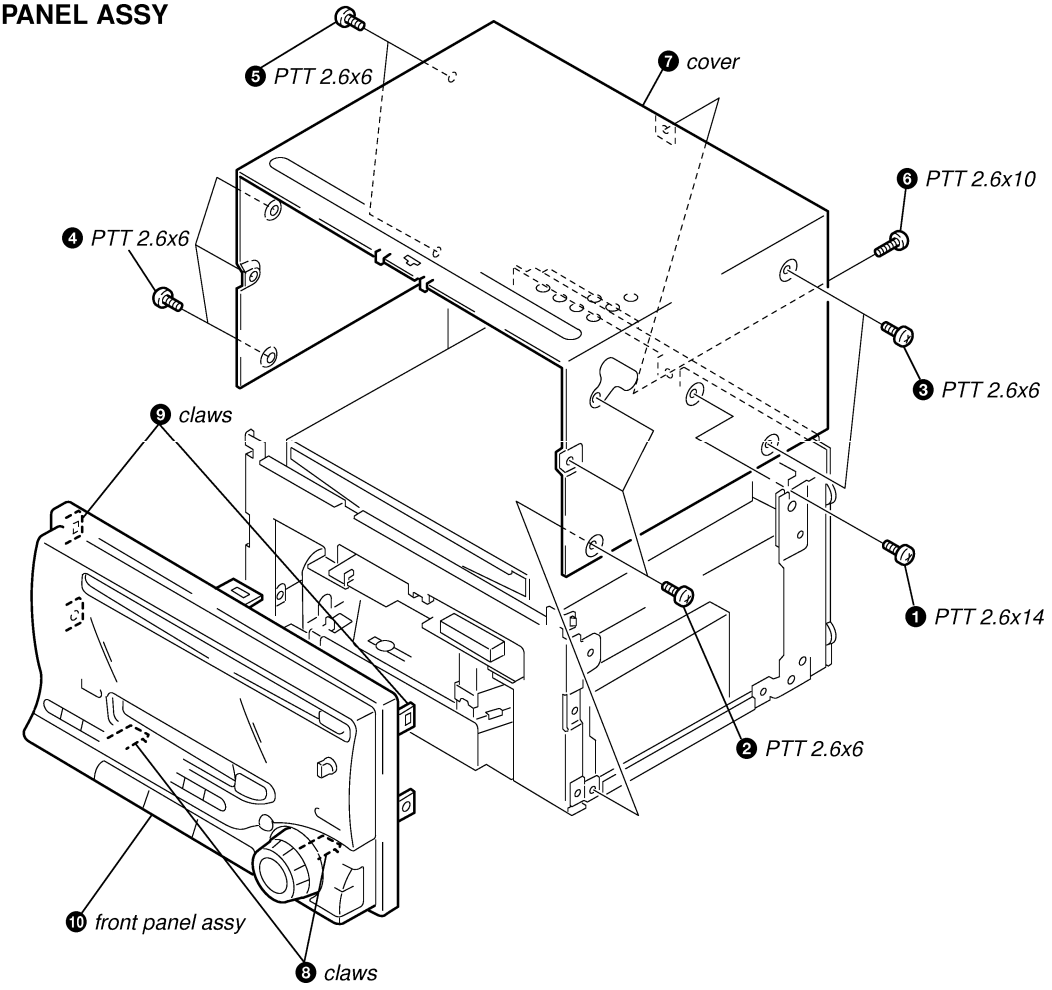
BUS cable (not supplied)
Cable BUS (no suministrado)
Styrkabel BUS (medföljer inte)
Cabo BUS (não fornecido)

* ***Note for the aerial connecting***
If your car aerial is an ISO (International Organization for Standardization) type, use the supplied adapter ⑤ to connect it.
First connect the car aerial to the supplied adapter, then connect it to the aerial jack of the master unit.
* ***Nota sobre la conexión de la antena***
Si la antena del automóvil es del tipo ISO (International Organization for Standardization), emplee el adaptador suministrado ⑤ para conectarla.
En primer lugar, conecte la antena del automóvil al adaptador suministrado y, a continuación, a la toma de antena de la unidad principal.
* ***Angående antennanslutning***
Om motorantennen är av ISO-typ (International Organization for Standardization), använder du medföljande adapter ⑤ för att ansluta den.
Anslut först motorantennen till medföljande adapter och därefter till antennuttaget på huvudenheten.
* ***Nota referente à ligação da antena***
Se a antena do automóvel for uma antena de tipo ISO (International Organization for Standardization), utilize o adaptador fornecido ⑤ para fazer a ligação respectiva.
Ligue primeiro a antena do automóvel ao adaptador fornecido e depois à ficha tipo jack de antena do sistema principal.

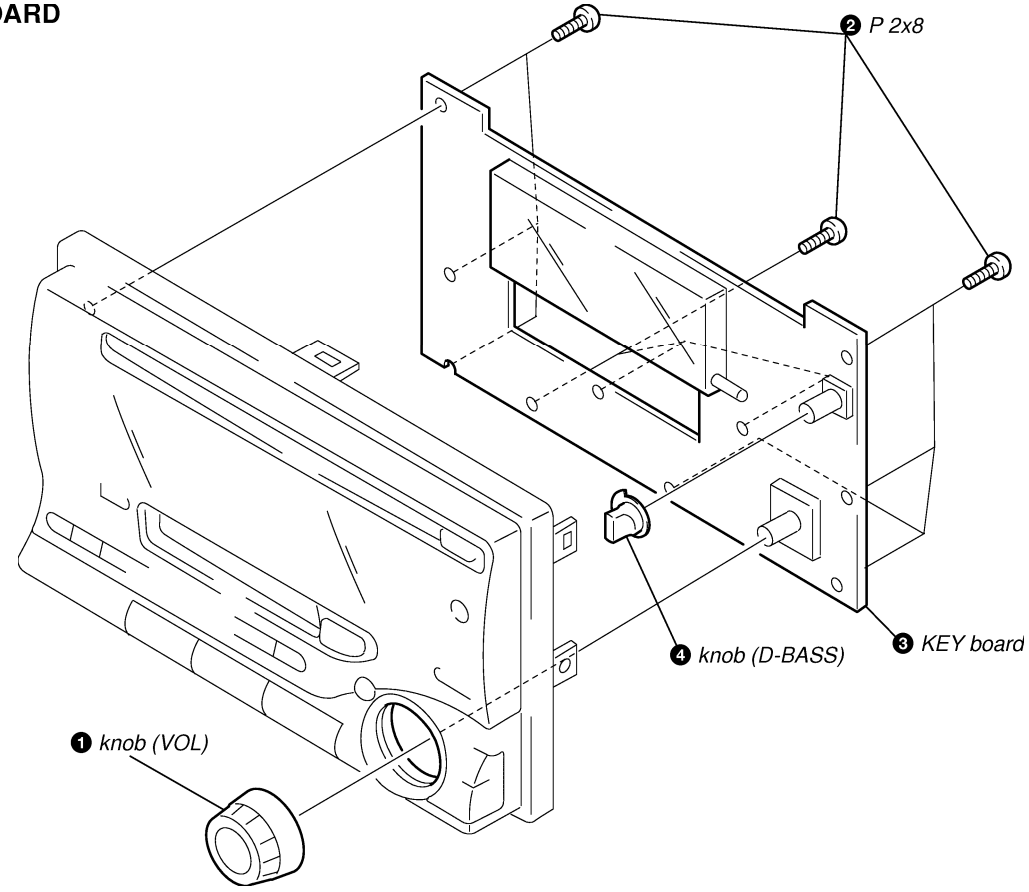
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

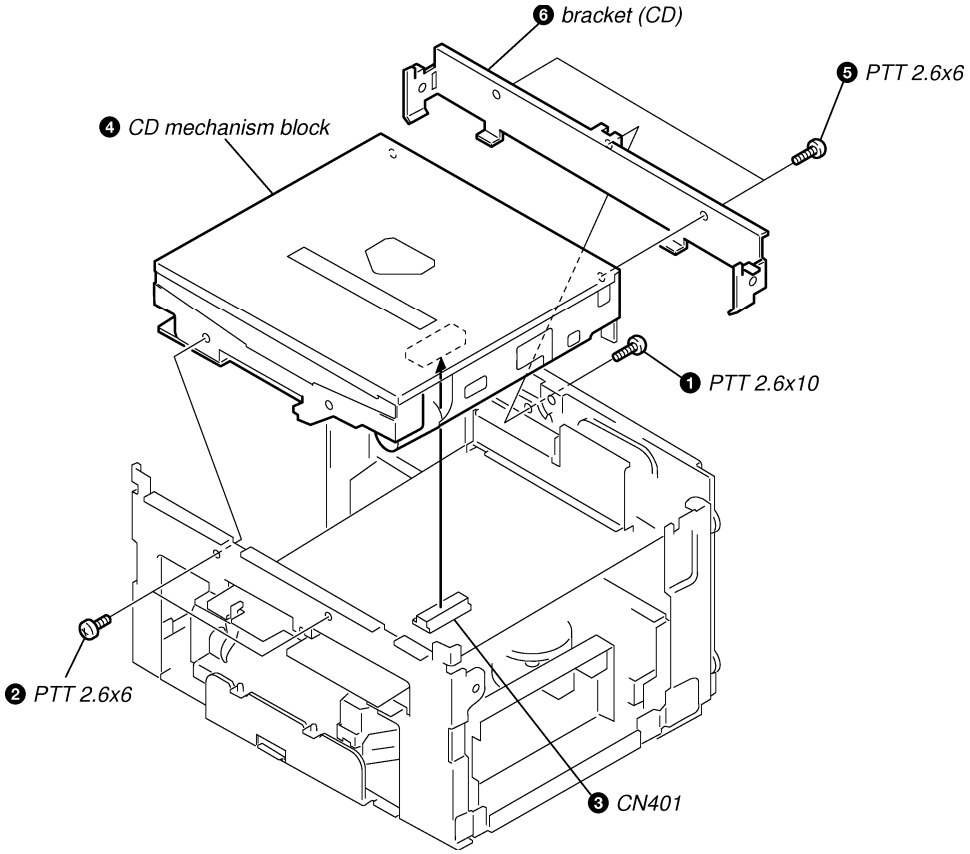
2-1. FRONT PANEL ASSY



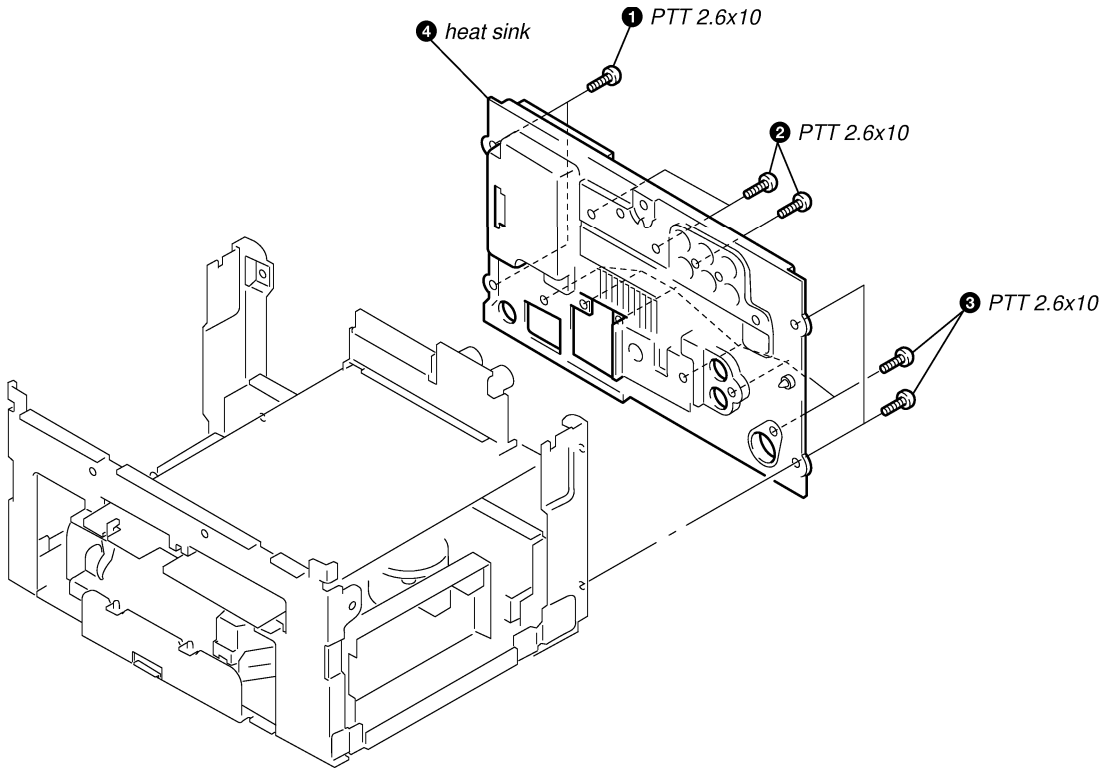
2-2. KEY BOARD



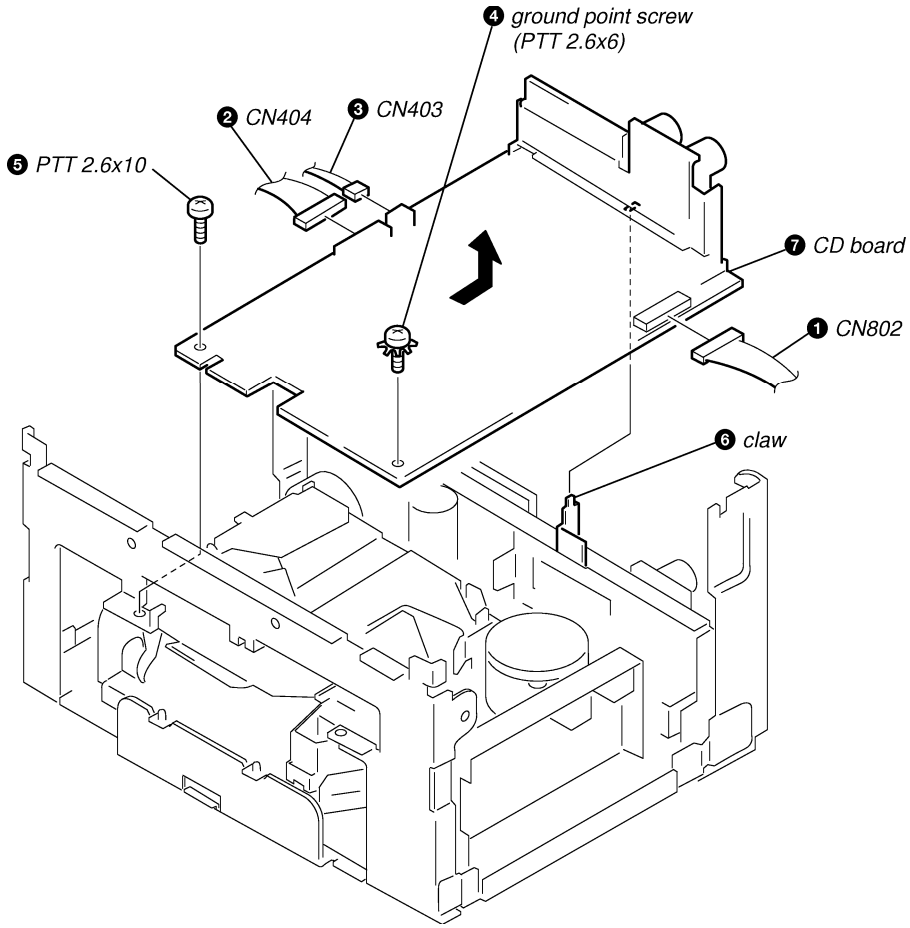
2-3. CD MECHANISM BLOCK



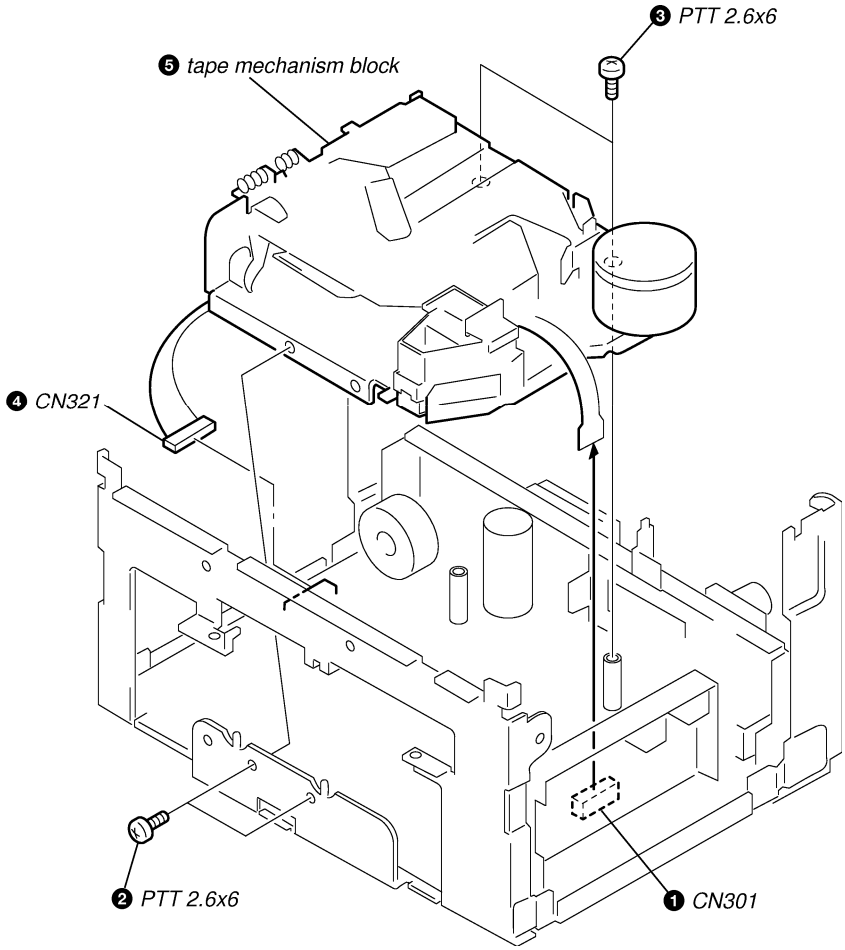
2-4. HEAT SINK



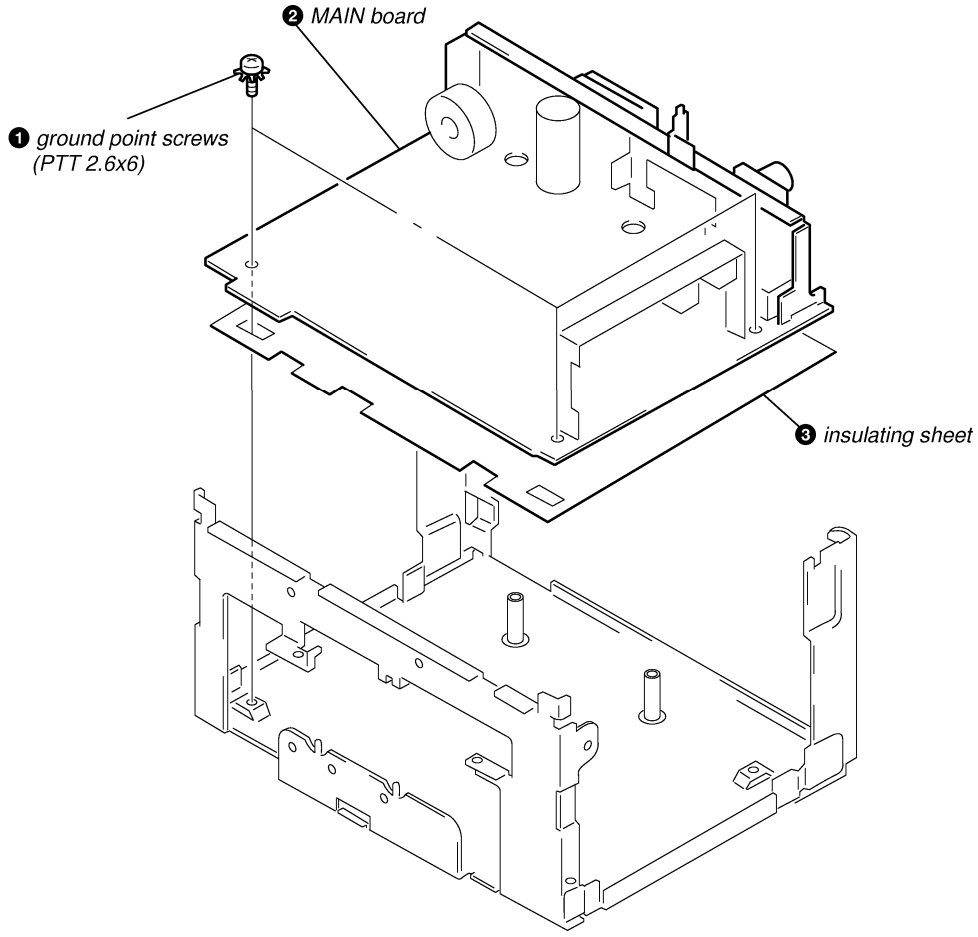
2-5. CD BOARD



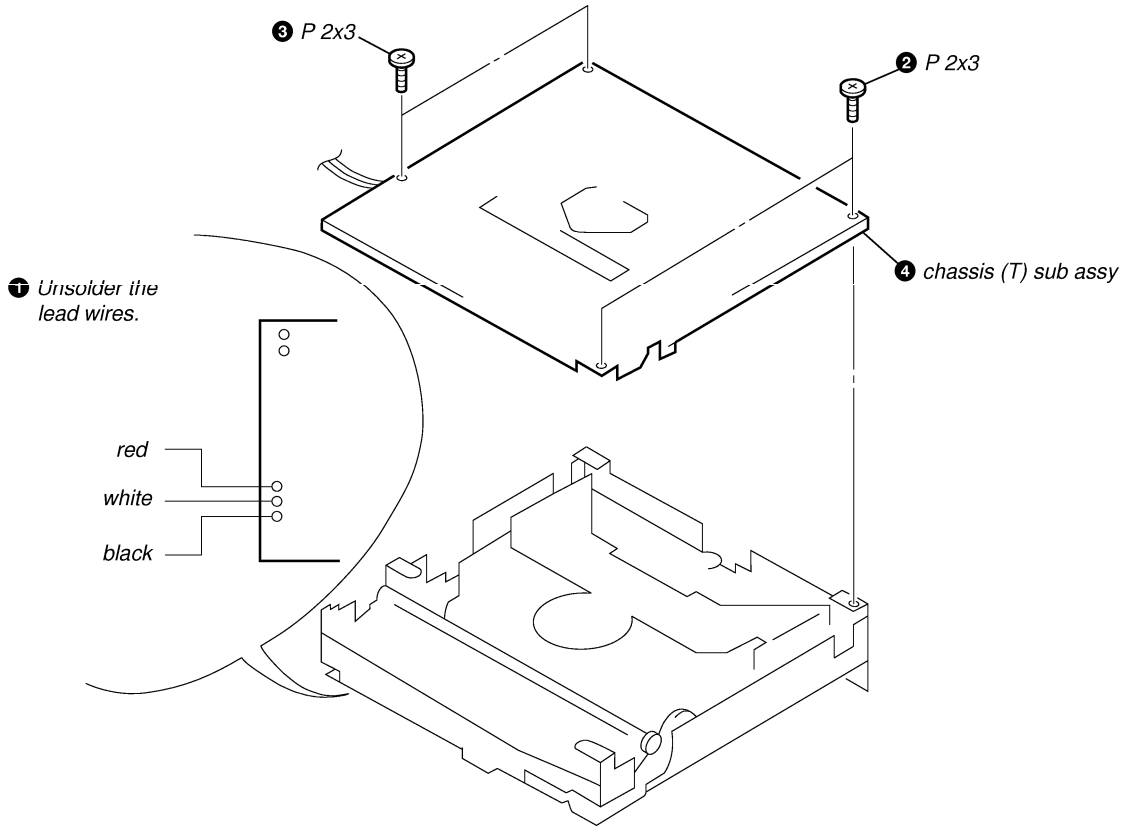
2-6. TAPE MECHANISM BLOCK



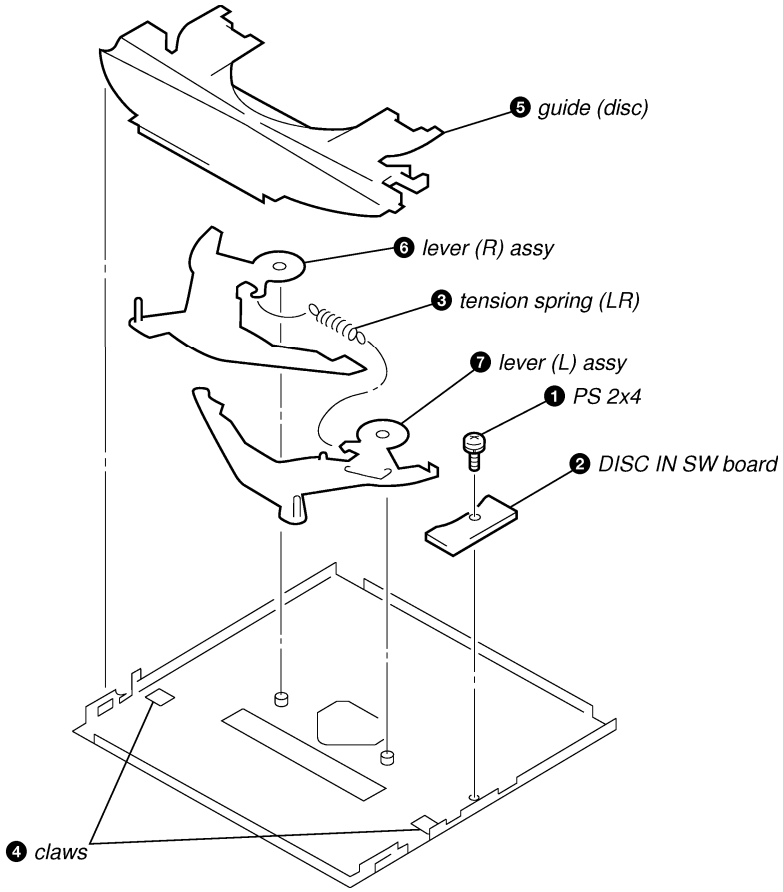
2-7. MAIN BOARD



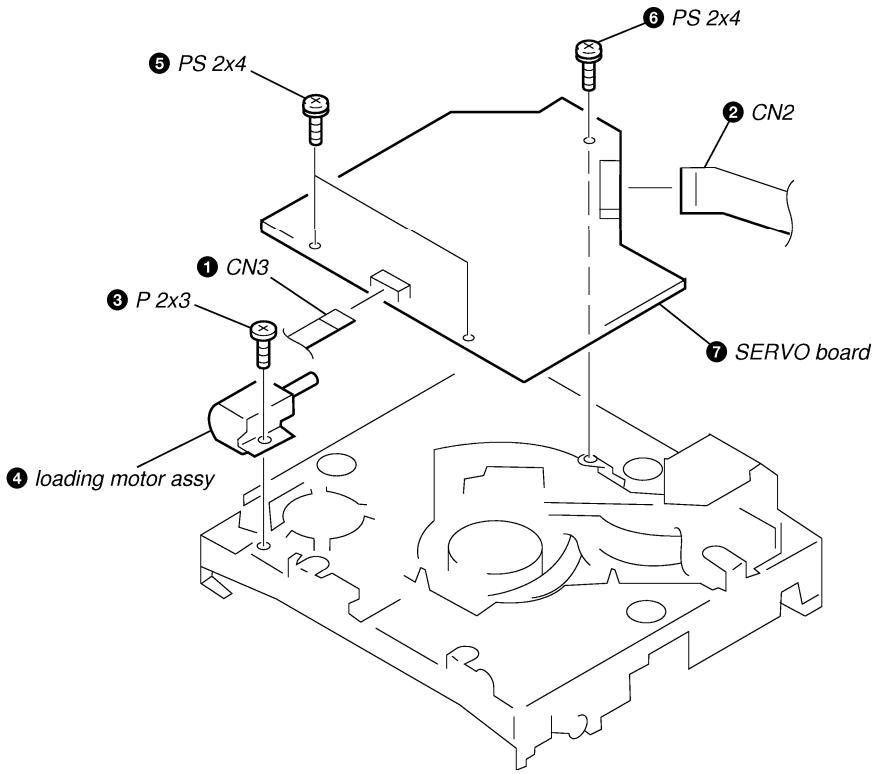
2-8. CHASSIS (T) SUB ASSY



2-9. LEVER ASSY



2-10. SERVO BOARD



2-11. ROLLER ASSY

• When installing, take note of the positions arm (roller) and washers. (Fig. 1)

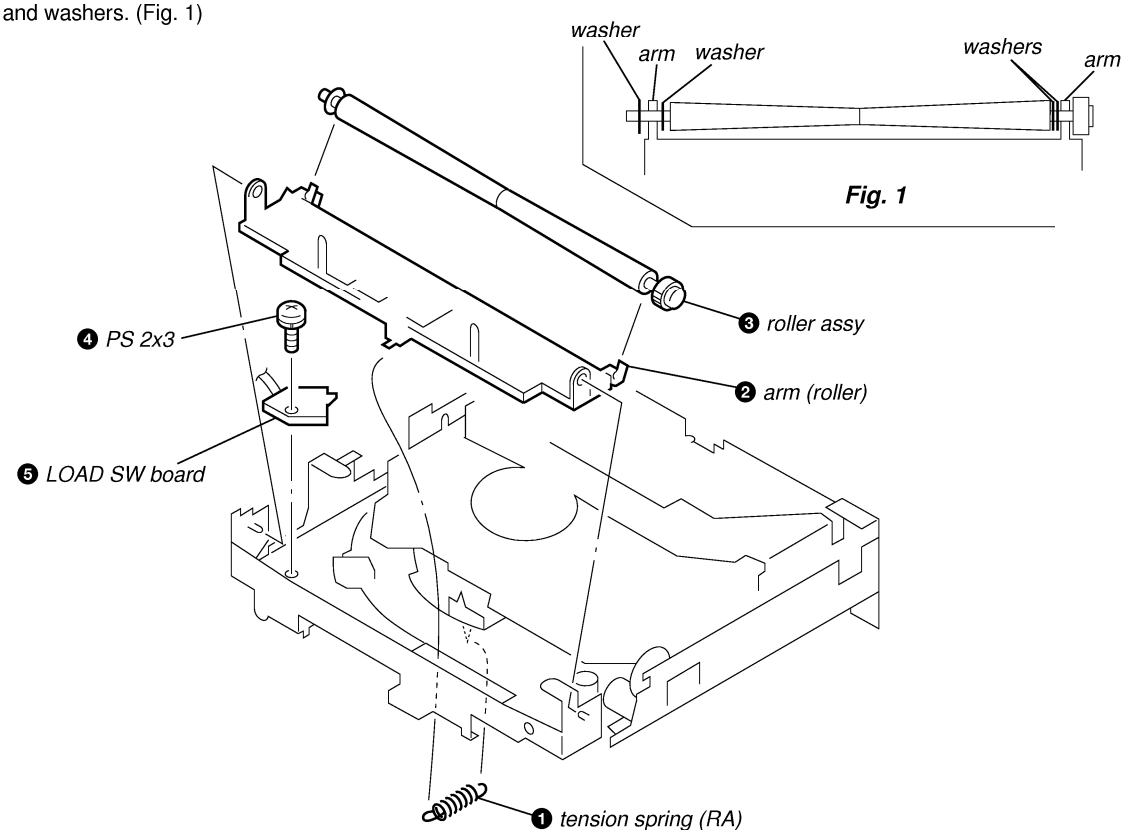
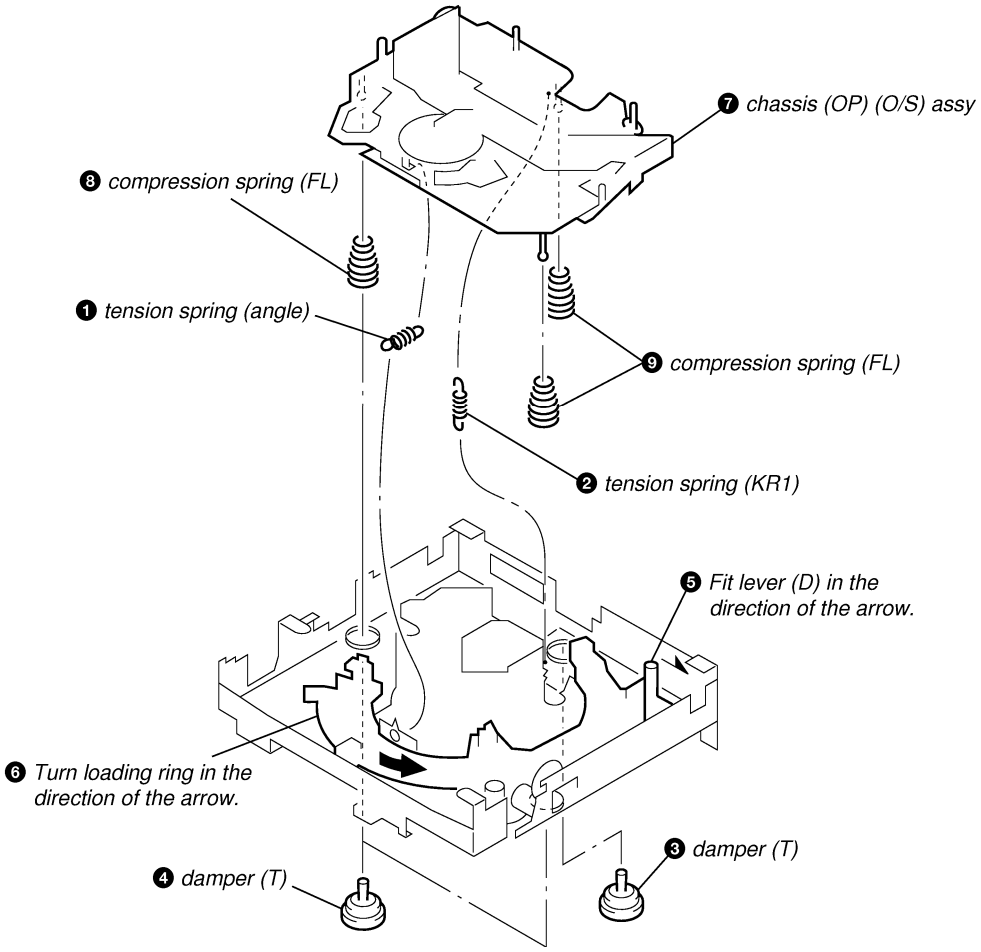
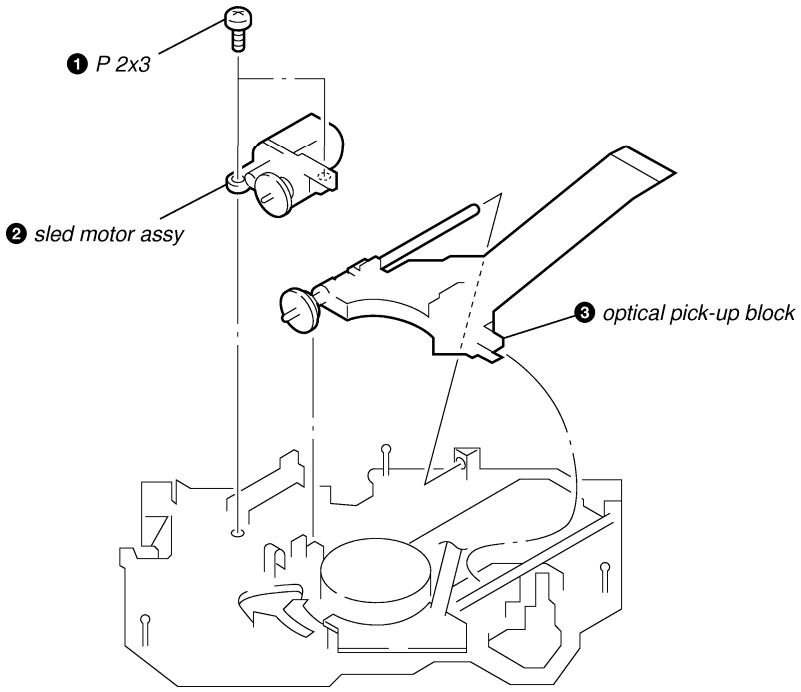


Fig. 1

2-12. CHASSIS (OP) (O/S) ASSY


❼ chassis (OP) (O/S) assy
❽ compression spring (FL)
❶ tension spring (angle)
❾ compression spring (FL)
❷ tension spring (KR1)
❺ Fit lever (D) in the direction of the arrow.
❻ Turn loading ring in the direction of the arrow.
❸ damper (T)
❹ damper (T)

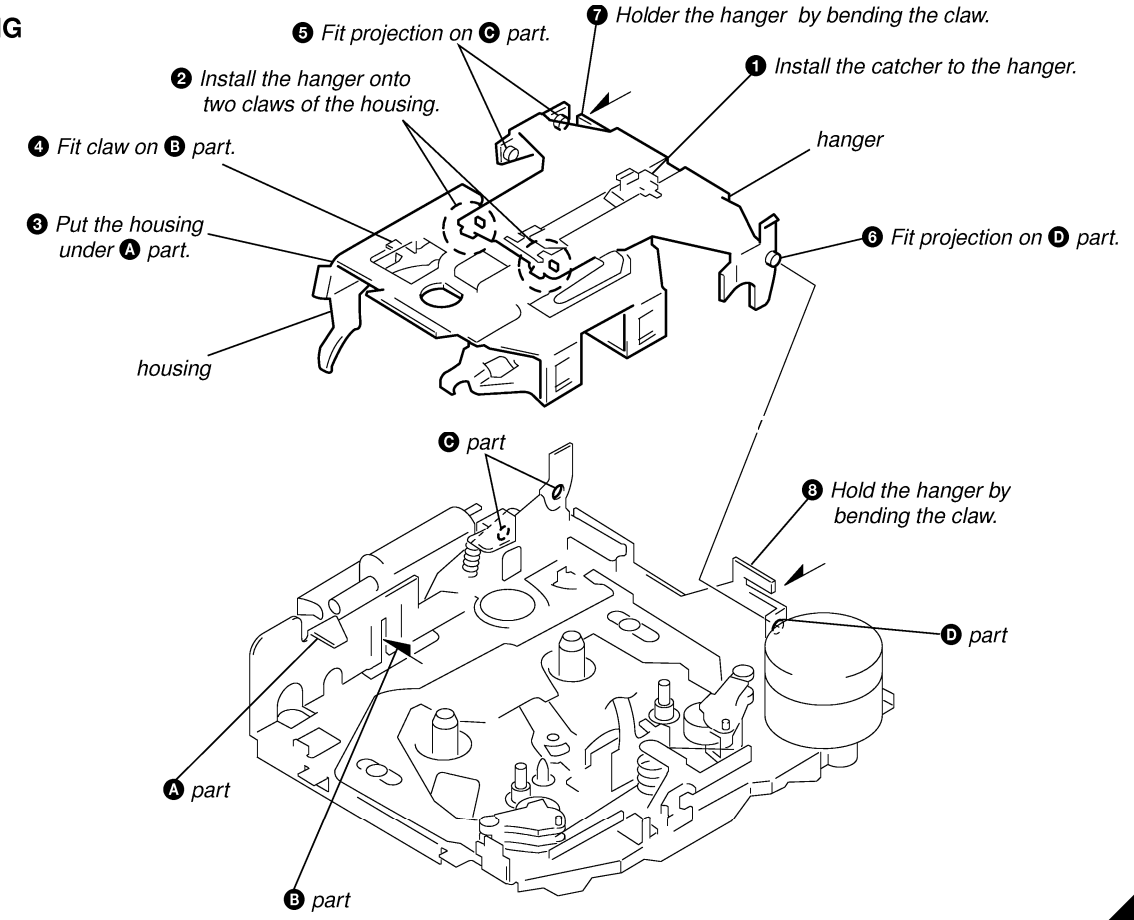
2-13. OPTICAL PICK-UP BLOCK



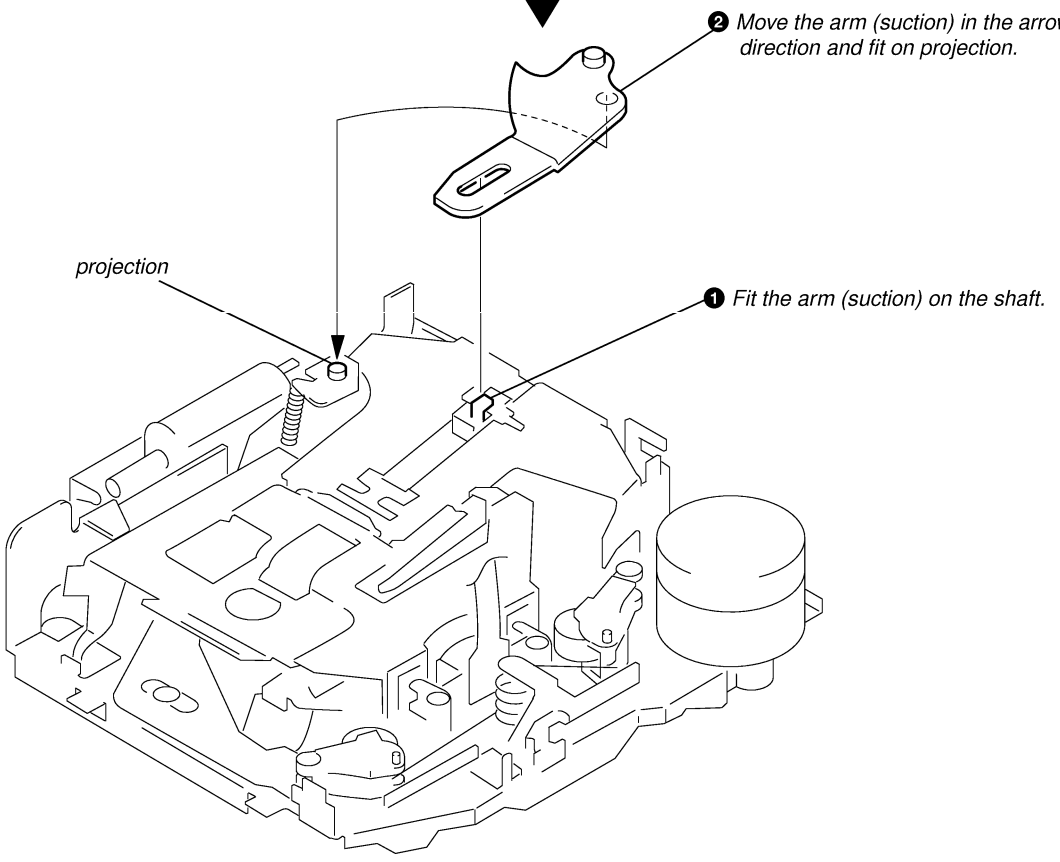
SECTION 3
ASSEMBLY OF MECHANISM DECK

Note : Follow the assembly procedure in the numerical order given.

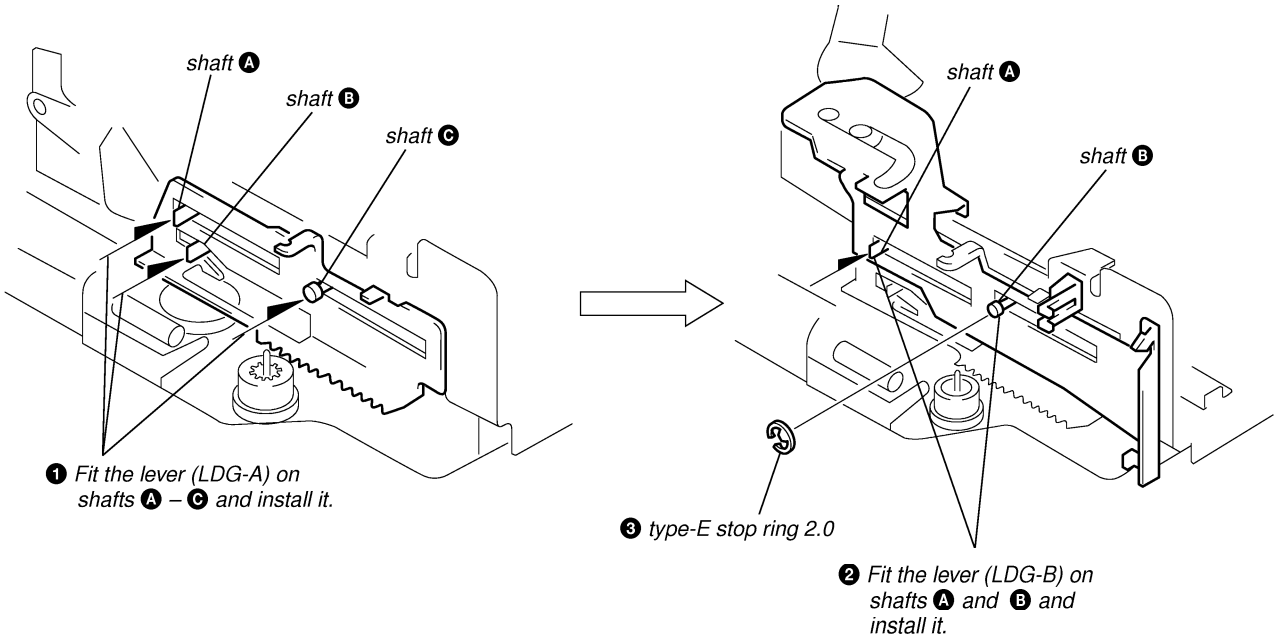
HOUSING


❺ Fit projection on Ⓒ part.
❼ Holder the hanger by bending the claw.
❶ Install the catcher to the hanger.
❷ Install the hanger onto two claws of the housing.
hanger
❹ Fit claw on Ⓑ part.
❸ Put the housing under Ⓐ part.
❻ Fit projection on Ⓓ part.
housing
Ⓒ part
❽ Hold the hanger by bending the claw.
Ⓓ part
Ⓐ part
Ⓑ part

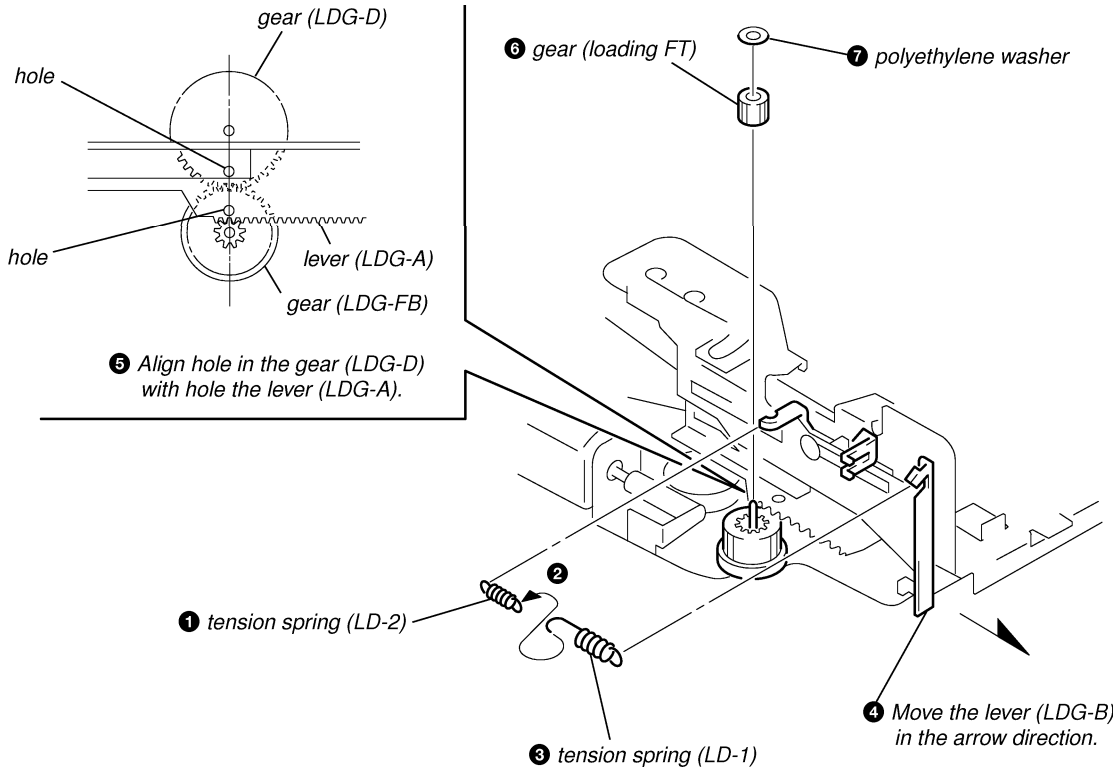
ARM (SUCTION)



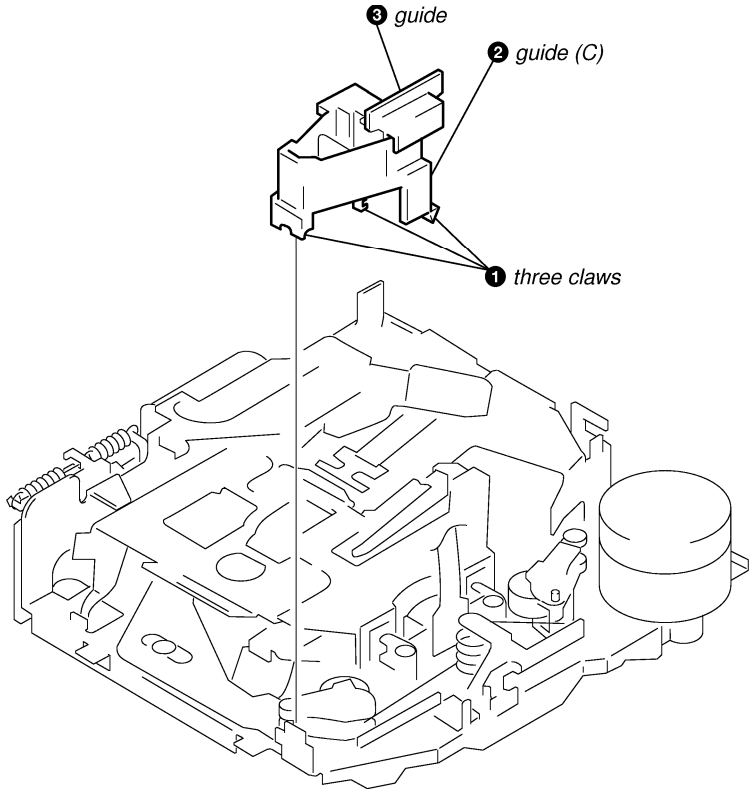
LEVER (LDG-A) / (LDG-B)


shaft Ⓐ
shaft Ⓑ
shaft Ⓒ
❶ Fit the lever (LDG-A) on shafts Ⓐ – Ⓒ and install it.
shaft Ⓐ
shaft Ⓑ
❸ type-E stop ring 2.0
❷ Fit the lever (LDG-B) on shafts Ⓐ and Ⓑ and install it.

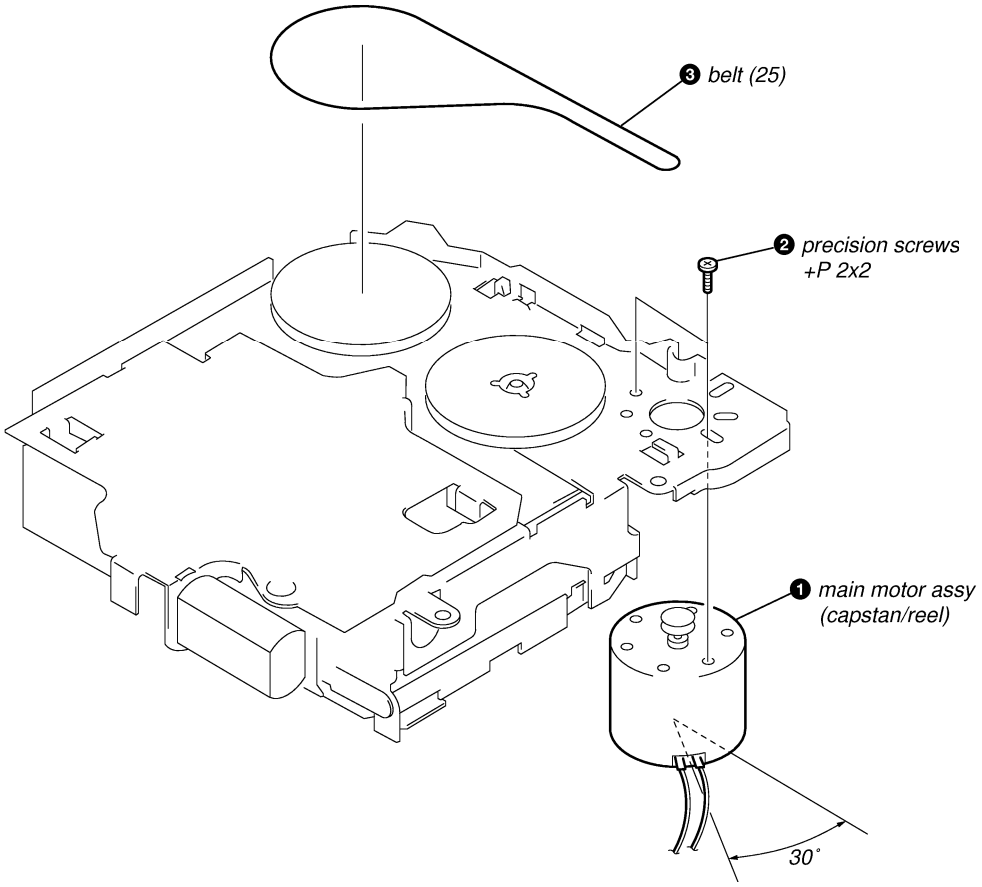
GEAR (LOADING FT)



GUIDE (C), GUIDE



MOUNTING POSITION OF MAIN MOTOR ASSY (M904)



SECTION 4
MECHANICAL ADJUSTMENTS

PRECAUTION

1. Wipe the following components with an absorbent cotton cloth moistened with alcohol before adjustment :
   PB head Pinch roller
   Idler Rubber belt
   Capstan
2. Demagnetize the PB head using a head demagnetizer.
3. Be careful not to use a magnetized screwdriver.
4. After the adjustment is completed, lock the adjustment parts using screws.
5. Unless otherwise specified, make adjustments at the specified voltage (14.4V).

Torque Measurement

Mode	Torque Meter	Meter Reading
FWD	CQ-102C	35 – 65 g • cm (0.49 – 0.90 oz • inch)
FWD Back Tension		0.5 – 5.0 g • cm (0.01 – 0.07 oz • inch)
REV	CQ-102RC	35 – 65 g • cm (0.49 – 0.90 oz • inch)
REV Back Tension		0.5 – 5.0 g • cm (0.01 – 0.07 oz • inch)
FF, REW	CQ-201B	60 – 200 g • cm (0.83 – 2.78 oz • inch)

Tape Tension Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 60 g (more than 2.12 oz)
REV	CQ-403R	

SECTION 5
ELECTRICAL ADJUSTMENTS

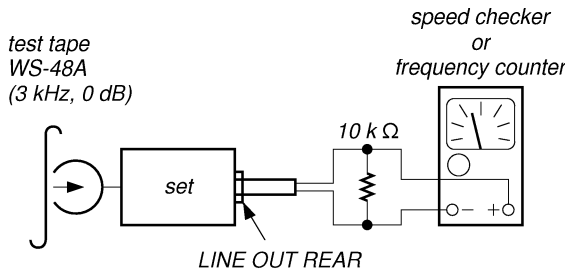
See the adjustment location from on page 31 for the adjustment.

TAPE SECTION **0 dB = 0.775 V**

Tape Speed Adjustment

Procedure :

1. Put the set into the FWD PB mode.



Specification : Constant speed

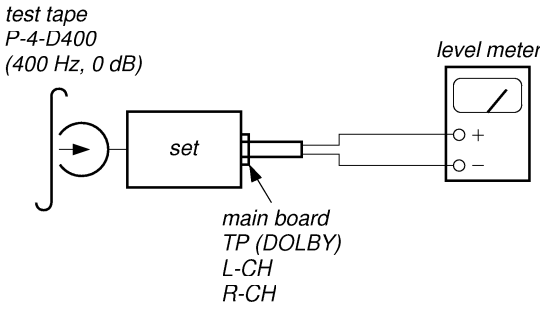
Speed checker	Frequency counter
– 1.5 to + 2.5 %	2,955 to 3,075 Hz

Adjustment Location : See page 31.

DOLBY Level Adjustment

Setting :

SHIFT button : ON (light up REP, SET UP and P MODE)
Preset [9] (P MODE) button : ON (light up P MODE and →)
Preset [10] (→) button : NR off



Procedure :

1. Put the set into the FWD PB mode.
2. Adjust RV101 (L-CH) and RV201 (R-CH) on main board so that level meter reading is – 6 ± 0.5 dB (0.37 to 0.41 V).

Adjustment Location : See page 31.

TUNER SECTION **0 dB = 1 µV**

Cautions during repair
When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

TEST MODE

This set have the test mode function. In the test mode, FM Auto Scan/Stop Level and MW Auto Scan/Stop Level adjustments can be performed easier than it in ordinary procedure.

<Set the Test Mode>
1. Set the "POWER SELECT" switch (S501) is "OFF" position.
2. Turn ON the regulated power supply. (All LEDs on the set lights up, and the clock is displayed.)
3. Push the preset [4] button.
4. Push the preset [5] button.
5. Press the preset [1] button for more than two seconds.
6. Then the display indicates all lights, the test mode is set.

<Release the Test Mode>
1. Push the [OFF] button.

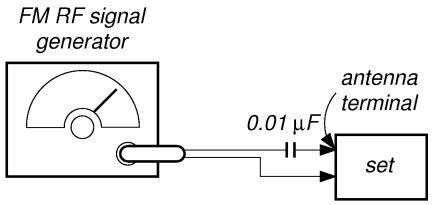
Note on Adjustment

The adjustments of tuner section, should be performed according to the following sequence.
1. FM Auto Scan/Stop Level Adjustment
2. FM Stereo Separation Adjustment
3. FM RDS S-Meter Adjustment
4. MW Auto Scan/Stop Level Adjustment

FM Auto Scan/Stop Level Adjustment

Setting :

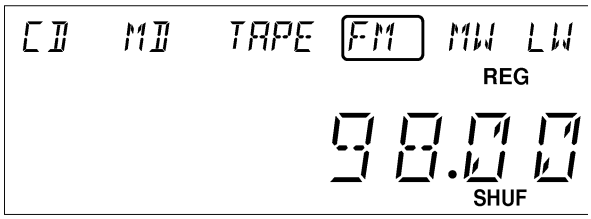
D-BASS switch : OFF
TUNER button : FM



Carrier frequency : 98.00 MHz
Output level : 22 dB (12.6 µV)
Mode : mono
Modulation : 1 kHz, 22.5 kHz deviation (30%)

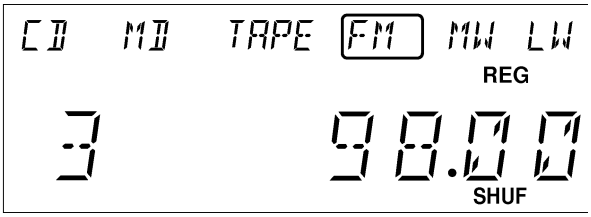
Procedure :
1. Set to the test mode.
2. Push the [TUNER] button and set to FM.

Display



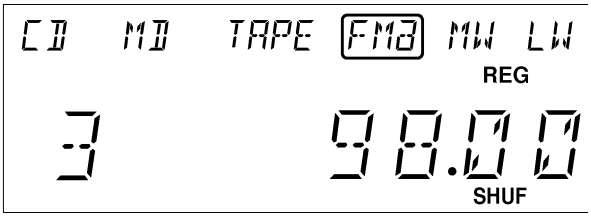
3. Push the preset [3] button.

Display



4. Adjust with the volume RV2 on TU1 so that the "FM" indication turns to "FM3" indication on the display window.
But, in case of already indicated "FM3", turn the RV2 so that put out light "3" indication and adjustment.

Display

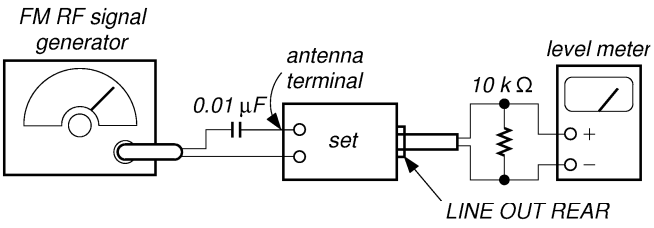


Adjustment Location : See page 31.

FM Stereo Separation Adjustment

Setting :

D-BASS switch : OFF
TUNER button : FM



Carrier frequency : 98.00 MHz
Output level : 70 dB (3.2 mV)
Mode : stereo
Modulation : main :1 kHz, 20 kHz deviation (26.5%)
sub :1 kHz, 20 kHz deviation (26.5%)
19 kHz pilot : 7.5 kHz deviation (10%)

Procedure :

FM stereo signal generator output channel	Level meter connection	Level meter reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV4 on TU1 for maximum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV4 on TU1 for maximum reading.

L-CH stereo separation : Ⓐ – Ⓑ
R-CH stereo separation : Ⓒ – Ⓓ
The separations of both channels should be equal.

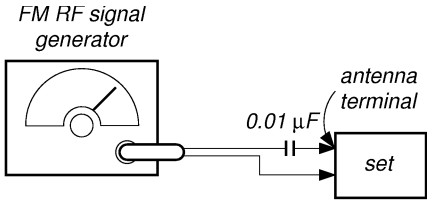
Specification : Separation more than 30 dB

Adjustment Location : See page 31.

FM RDS S-Meter Adjustment

Setting :

D-BASS switch : OFF
TUNER button : FM

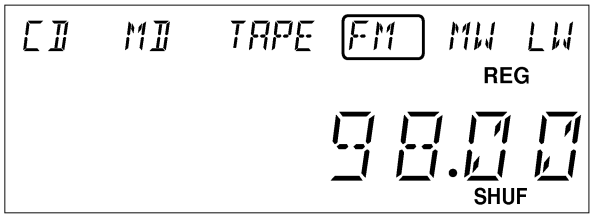


Carrier frequency : 98.00 MHz
Output level : 35 dB (56.2 µV)
Mode : mono
Modulation : no modulation

Procedure :

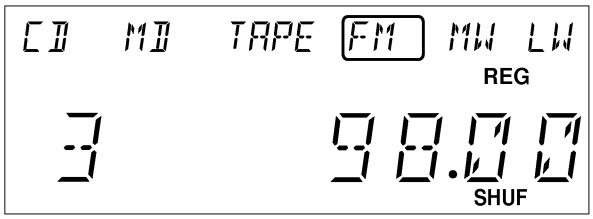
1. Set to the test mode. (See page 28.)
2. Push the TUNER button and set to FM.

Display



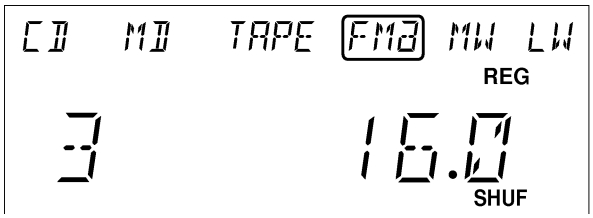
3. Push the preset 3 button.

Display



4. Push the preset 10 button.
5. Adjust RV31 so that the display indication is “16.0”.

Display



Specification : Display indication : 15.8 to 16.2.

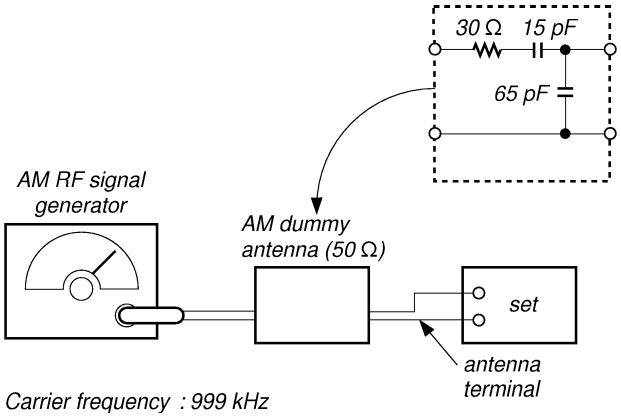
Adjustment Location : See page 31.

MW Auto Scan/Stop Level Adjustment

Note : This adjustment should be performed after the FM Auto Scan / Stop Level Adjustment is done.

Setting :

D-BASS switch : OFF
TUNER button (twice) : MW

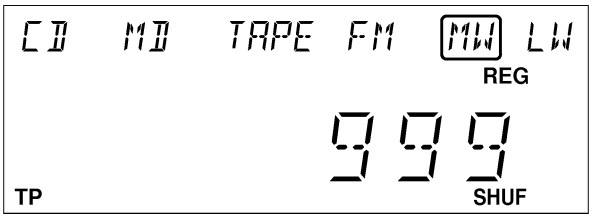


Carrier frequency : 999 kHz
30% amplitude modulation by 1 kHz signal
output level : 33 dB (44.7 µV)

Procedure :

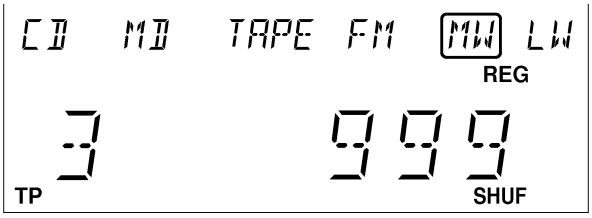
1. Set to the test mode. (See page 28.)
2. Push twice the [TUNER] button and set to MW.

Display



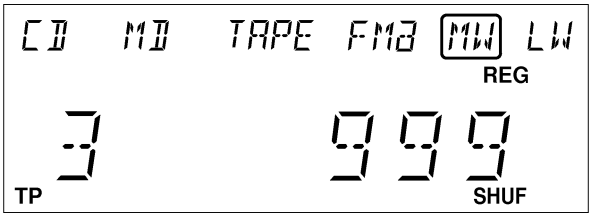
3. Push the preset [3] button.

Display



4. Adjust with the volume RV1 on TU1 so that the "MW" indication turns to "a MW" indication on the display window. But, in case of already indicated "a MW", turn the RV1 so that put out light "a" indication and adjustment.

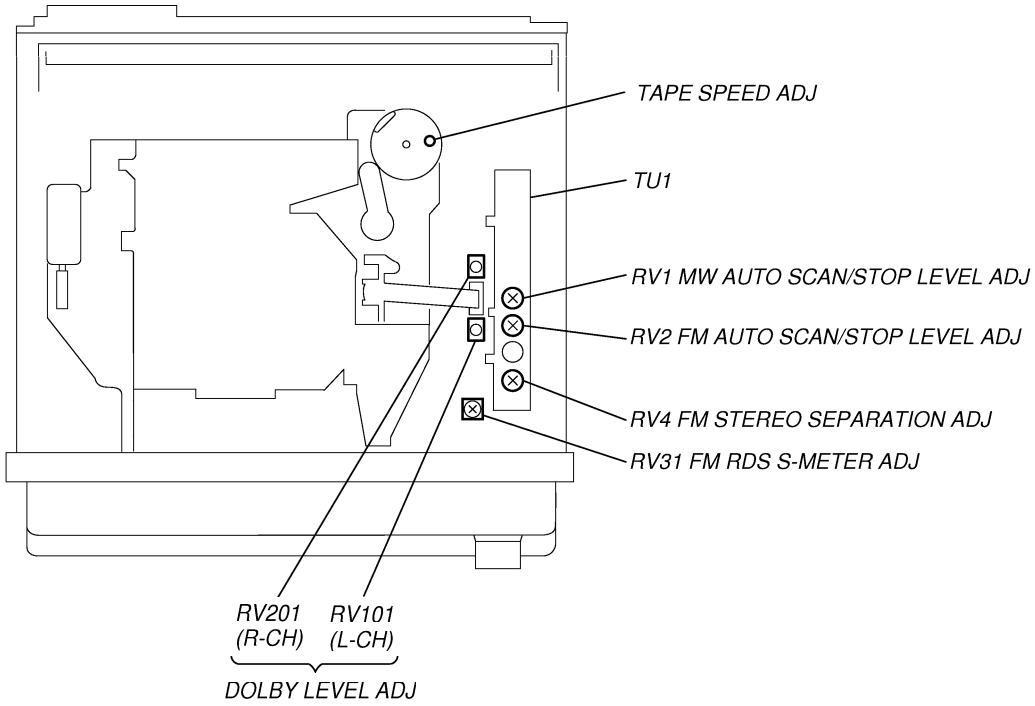
Display



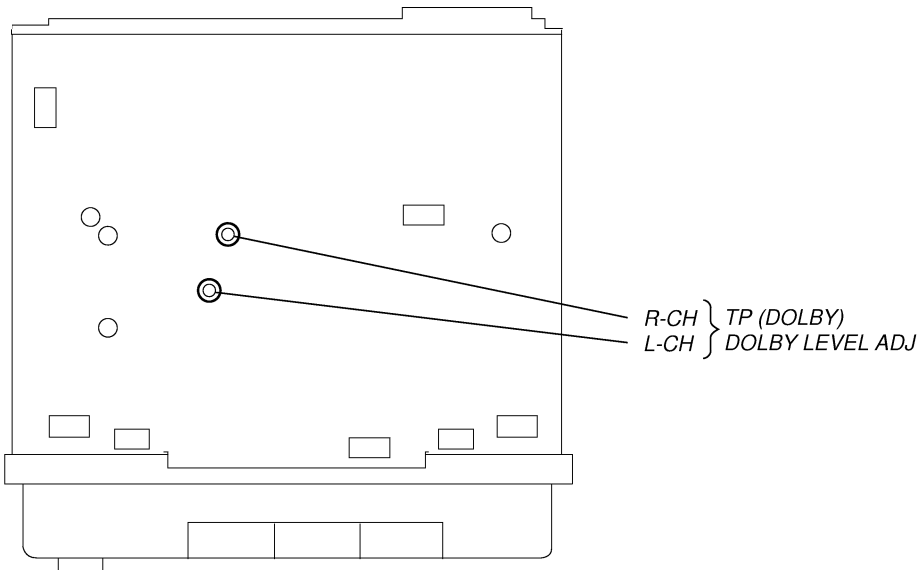
Adjustment Location : See page 31.

Adjustment Location :

– set upper view –



– set lower view –

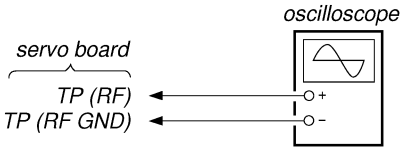


CD SECTION

Note :
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.
4. Clean an objective lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

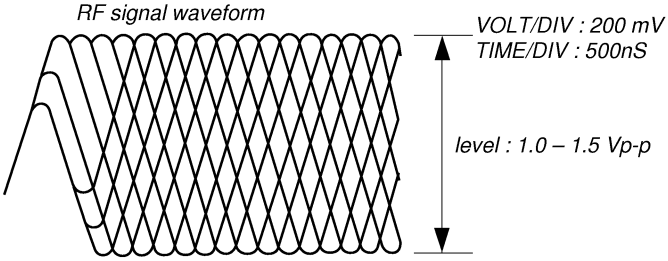
Focus Bias Adjustment

Setting : This adjustment is performed with the set placed horizontally.



Procedure :
1. Connect an oscilloscope between TP (RF) and TP (RF GND) on the servo board.
2. Connect the power supply.
3. Push the RESET button (SW701) on the key board.
4. Insert the disc (YEDS-18) and playback.
5. Adjust RV1 so that the oscilloscope waveform is clear and check RF signal level is correct or not.

Note : Clear RF signal waveform means that the sharp "◇" can be clearly distinguished at the center of the waveform.



• When observing the eye pattern, set the oscilloscope to AC range and raise the vertical sensitivity so that it may be easily seen.

Adjustment Location : servo board

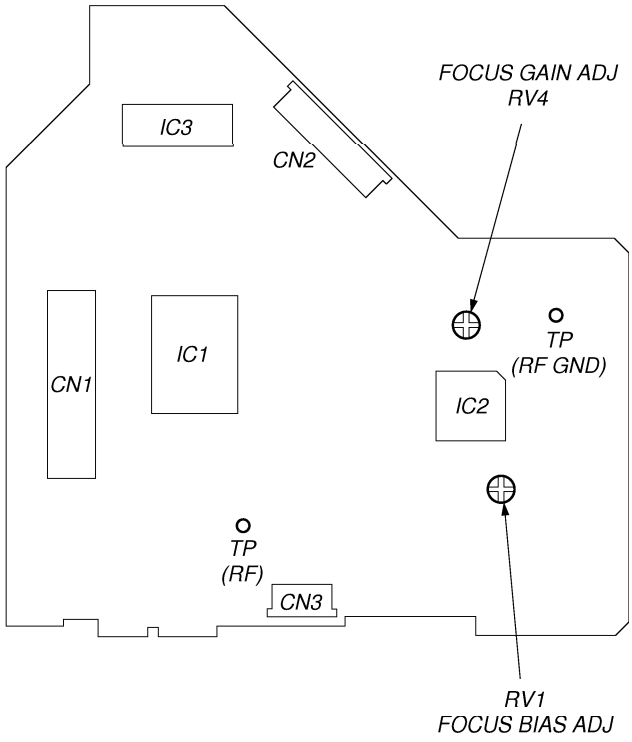
Focus Gain Adjustment (Coarse adjustment)

This adjustment is not required unless the following parts are replaced:
- Optical pick-up
- RV4

Procedure :
1. Set RV4 to the standard position. (mechanical center)
2. Check whether operation noise (while noise type) caused by the 2-axis device (lens section of the optical pick-up) is abnormally loud.
   If the operation noise is too loud, turn RV4 slightly counter-clockwise.
- If the gain is too low :
  Focus does not function and no music is selected.
- If the gain is too high :
  Noise caused by scratches and dust is heard and the operation becomes unstable.

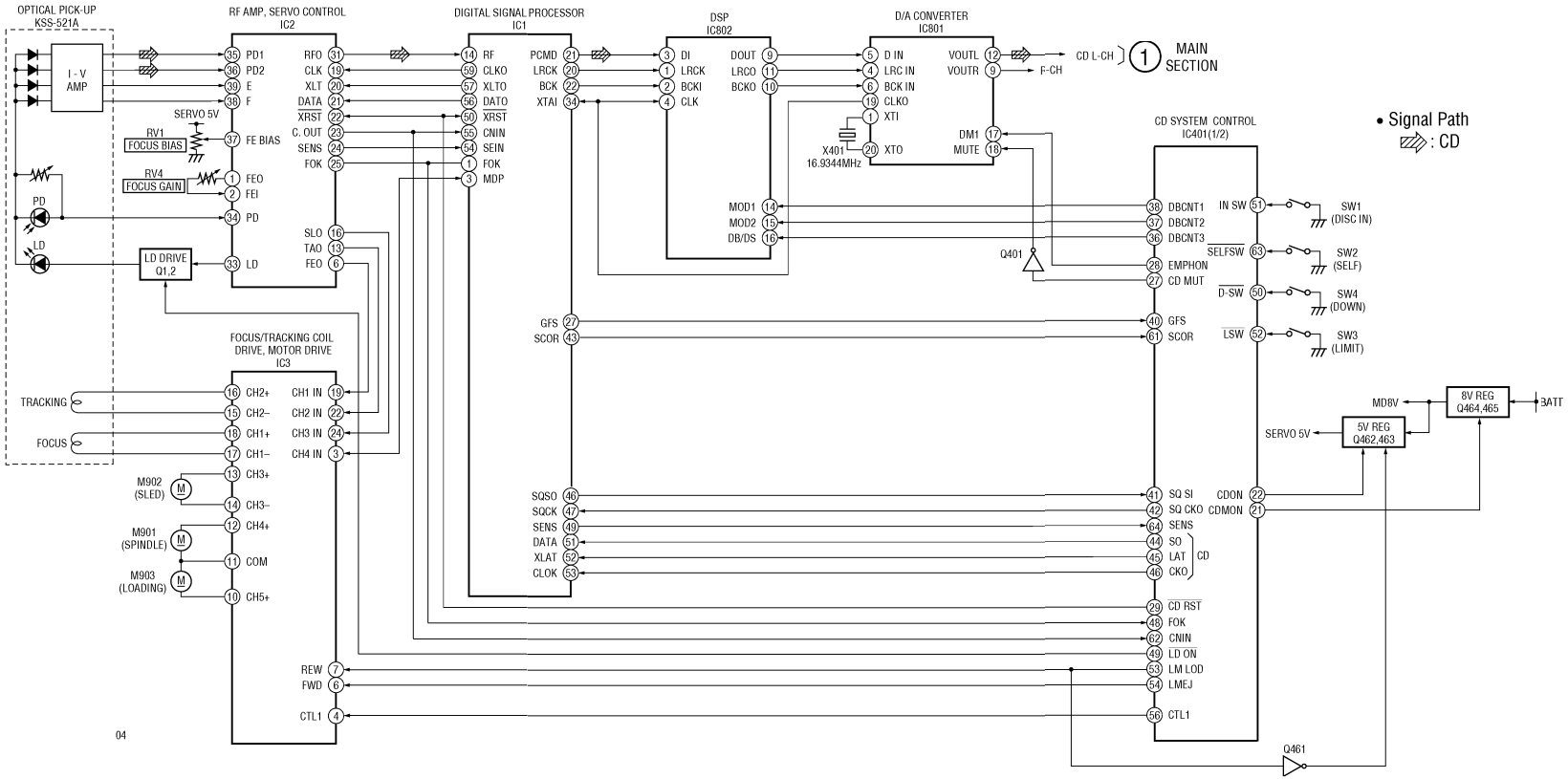
Adjustment Location : servo board

Adjustment Location : servo board (component side)

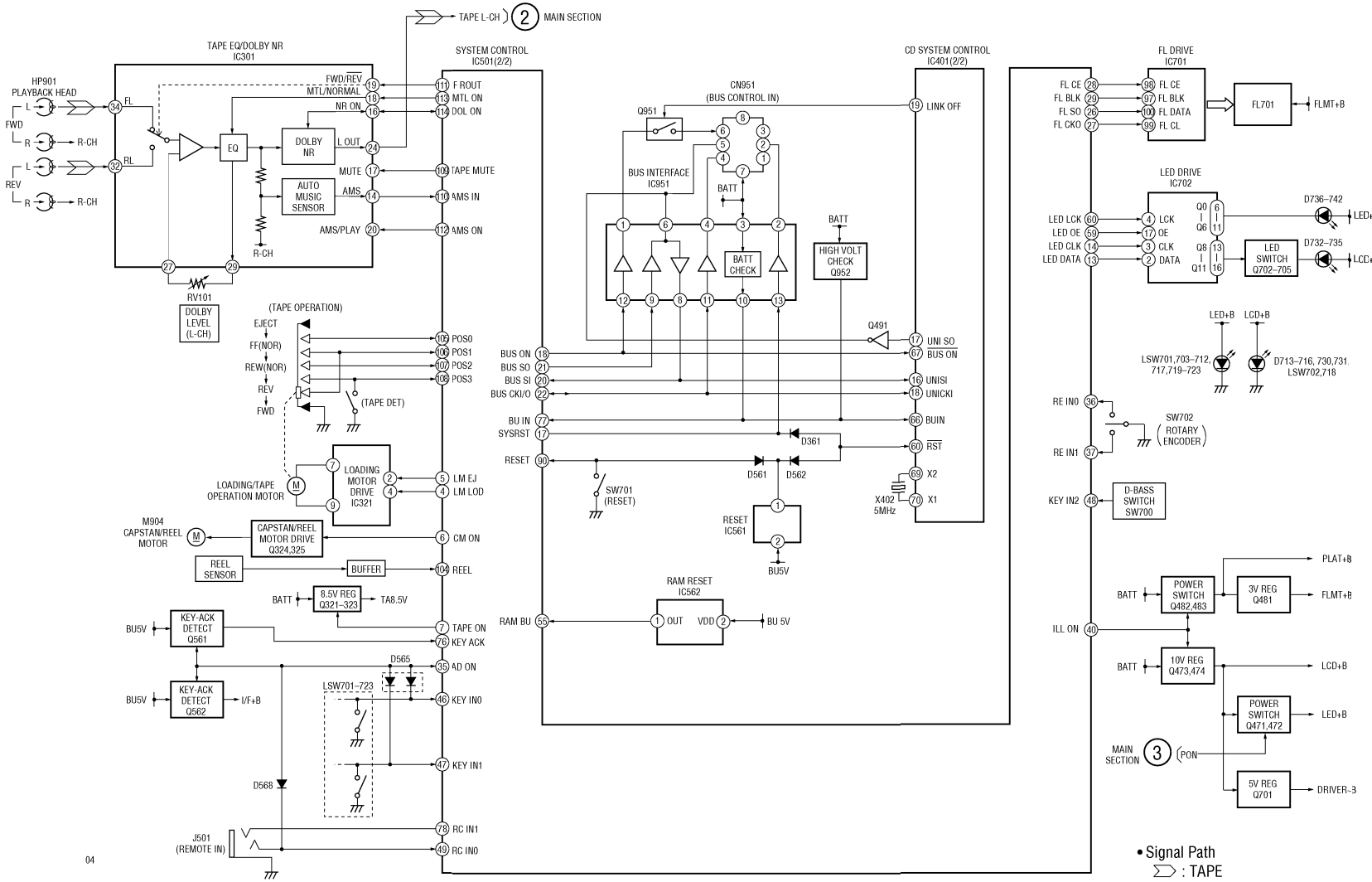


SECTION 6
DIAGRAMS

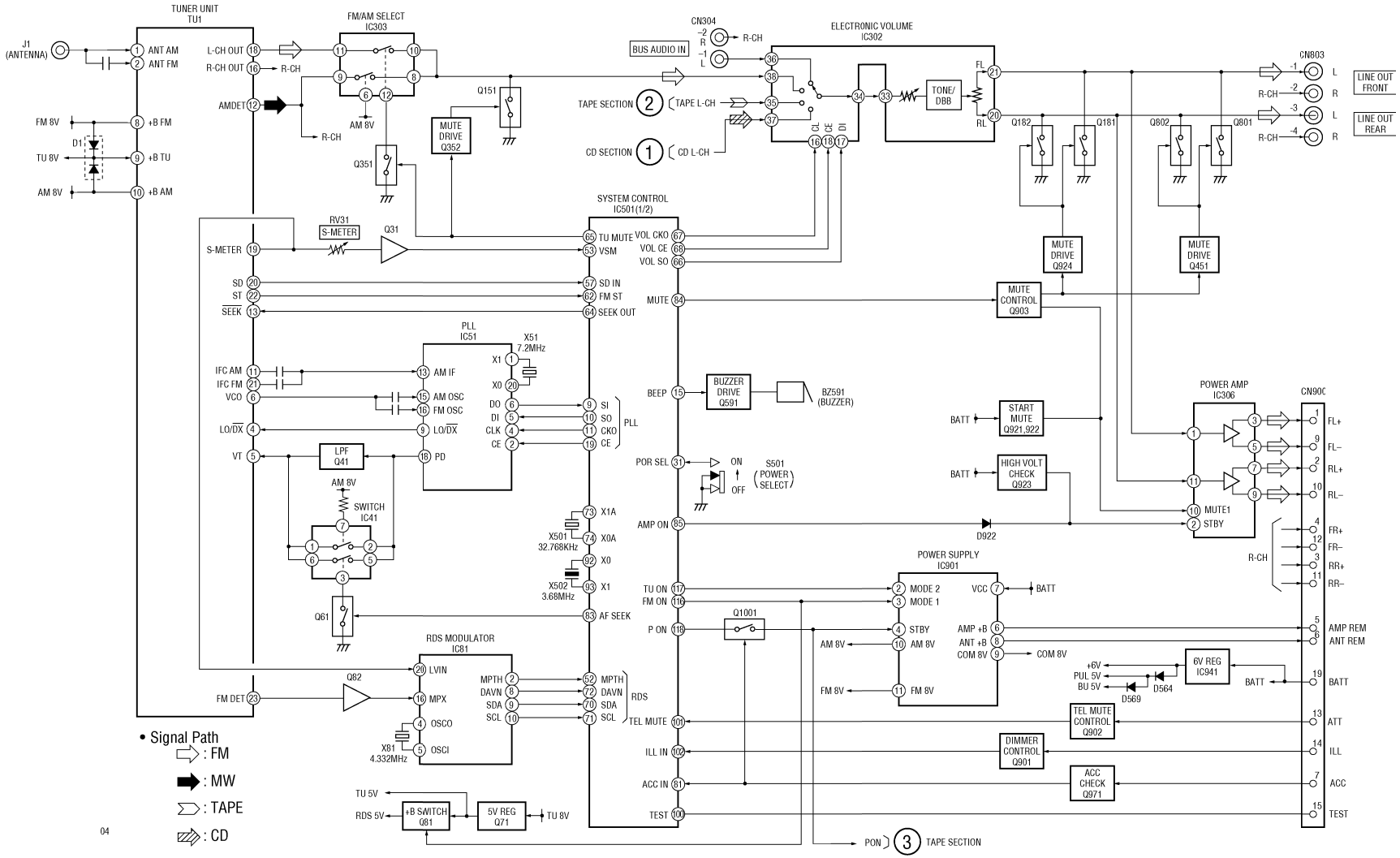
6-1. BLOCK DIAGRAM — CD SECTION —



6-2. BLOCK DIAGRAM — TAPE SECTION —



6-3. BLOCK DIAGRAM — MAIN SECTION —



6-4. IC PIN DESCRIPTIONS

• IC401 μPD78054GC-484-3B9 (CD SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1 – 3	NCO	I	Not used.
4	AVSS	—	GND for A/D conversion.
5, 6	NCO	O	Not used.
7	AVREF	—	Reference voltage power supply for D/A conversion. (+5 V)
8 – 15	NCO	O	Not used.
16	UNISI	I	Serial data input (for SONY BUS)
17	UNISO	O	Serial data output (for SONY BUS)
18	UNICKI	I	Serial clock input (for SONY BUS)
19	LINKOFF	O	Link off output
20	NCO	O	Not used.
21	CDMON	O	CD mechanism power control output
22	CD-ON	O	CD power control output
23 – 26	NCO	O	Not used.
27	CDMUT	O	CD mute control output
28	EMPHON	O	Emphasis control output
29	$\overline{\text{CDRST}}$	O	CD signal process IC reset output
30 – 32	NCO	I	Not used.
33	VSS	—	Microcomputer GND
34	TBTGSEL	I	CD traverse/tracking gain automatic adjustment select input
35	NCO	I	Not used.
36 – 38	DBCNT3 – 1	O	D-BASS (Digital Bass Boost) IC control output 3 – 1
39	DB RST	O	D-BASS (Digital Bass Boost) IC reset output
40	GFS	I	GFS signal detection input
41	SQ SI	I	SUB Q data input
42	SQ CKO	O	SUB Q clock output
43	NCO	I	Not used.
44	CD SO	O	CD signal process serial data output
45	CD LAT	O	CD signal process latch output
46	CD CKO	O	CD signal process serial clock output
47	NCO	I	Not used.
48	F OK	I	Focus signal detection input
49	$\overline{\text{LDON}}$	O	Laser ON/OFF control output
50	$\overline{\text{DSW}}$	I	DOWN switch detection input
51	IN SW	I	Disc insert detection input
52	$\overline{\text{LSW}}$	I	Sled limit switch detection input
53	LMLOD	O	Loading motor control output (Loading direction)
54	LMEJ	O	Loading motor control output (Eject direction)
55	NCO	I	Not used.
56	CTL1	O	Driver IC control output 1
57 – 59	NCO	O	Not used.
60	$\overline{\text{RST}}$	—	Reset input
61	SCOR	I	SCOR signal detection input
62	CNIN	I	Track jump number count input
63	SELFSW	I	Disc self store detection input
64	SENS	I	SENS signal detection input
65	NCO	O	Not used.
66	BUIN	I	Backup power detection input
67	$\overline{\text{BUSON}}$	I	BUS ON control input
68	VDD	—	Microcomputer power supply
69	X2	—	Main oscillator output (5 MHz)
70	X1	—	Main oscillator input (5 MHz)

Pin No.	Pin Name	I/O	Pin Description
71	GND	—	GND
72	(OPEN)	—	Not used.
73	GND	—	GND
74	AVDD	—	Power supply for A/D conversion.
75	AVREF	—	Reference voltage power supply for A/D conversion.
76, 77	NCO	I	Not used.
78	NIL	I	Not used. (Pull up 5 V.)
79, 80	NCO	I	Not used.

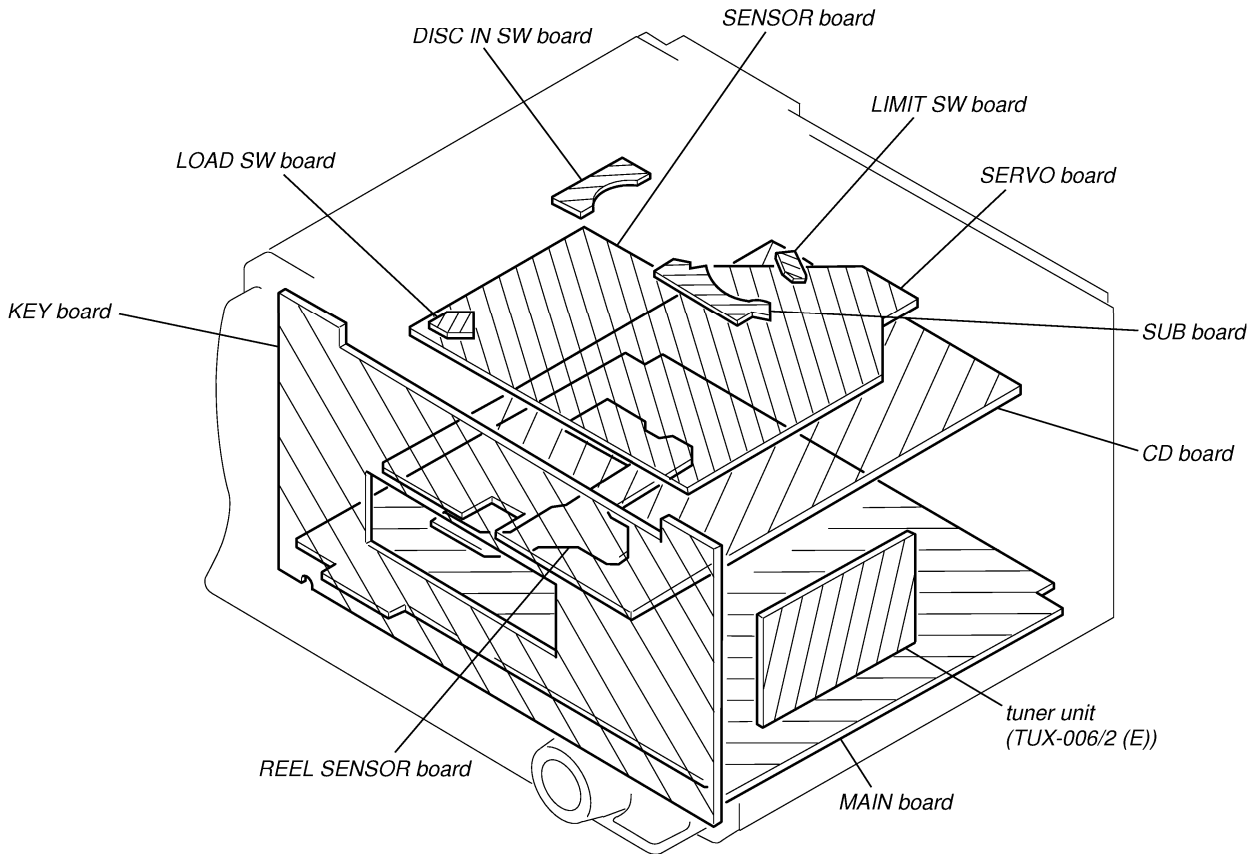
• IC501 MB90574PFV-G-118-BND (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1	—	—	Not used.
2	BUS CKO	—	Not used.
3	—	—	Not used.
4	LM-LOD	O	Tape loading motor control output (Loading direction)
5	LM-EJ	O	Tape loading motor control output (Eject direction)
6	CM-ON	O	Tape capstan motor control output
7	TAPE ON	O	Tape power control output
8	VCC	—	Power supply pin (+5 V)
9	PLL SI	I	PLL data input
10	PLL SO	O	PLL data output
11	PLL CKO	O	PLL clock output
12	FLA DI	—	Not used.
13	LED DATA	O	LED driver control serial data output
14	LED CLK	O	LED driver control serial clock output
15	BEEP	O	BEEP output
16	—	—	Not used.
17	SYSRST	O	System reset output
18	BUS ON	O	Bus ON control output
19	PLL CE	O	PLL chip enable output
20	BUS SI	O	Serial data input (for SONY BUS)
21	BUS SO	O	Serial data output (for SONY BUS)
22	BUS CKI/O	I/O	Serial clock input/output (for SONY BUS)
23	FLASH W	I	Flash write in mode detection input
24	SIRCS	I	Remote commander input (Not used in this set.)
25	—	—	Not used.
26	FL SO	O	FL serial data output
27	FL CKO	O	FL serial clock output
28	FL CE	O	FL serial chip enable output
29	FL BLK	O	FL blank control output
30 – 32	—	—	Not used.
33	VSS	—	GND
34	C	—	Power stabilization capacitor pin
35	AD ON	O	Power control output of A/D conversion.
36, 37	RE IN0, 1	I	Rotary encoder input 0, 1
38	DVCC	—	D/A converter VREF input
39	DVSS	—	GND of D/A converter.
40	ILL ON	O	Illumination power control output
41	TAPE ING	—	Not used.
42	AVCC	—	Analog power supply pin (+5 V)
43	AVRH	—	A/D converter VREF+ input
44	AVRL	—	A/D converter VREF- input
45	AVSS	—	Analog GND
46, 47	KEY IN0, 1	I	Key input 0, 1
48	KEY IN2	I	D-BASS switch input
49	RC IN0	I	Rotary commander input 0
50	DSTSEL0	I	Destination select input 0 (Fixed at “L” in this set.)
51	DSTSEL1	I	Destination select input 1 (Fixed at “L” in this set.)
52	RDS MTPH	I	Tuner multi-pass input
53	VSM	I	S-Meter voltage detection input
54	VCC	—	Power supply pin (+5 V)
55	RAM BU	I	RAM reset detection input
56	POW SEL	I	Power select initial setting input

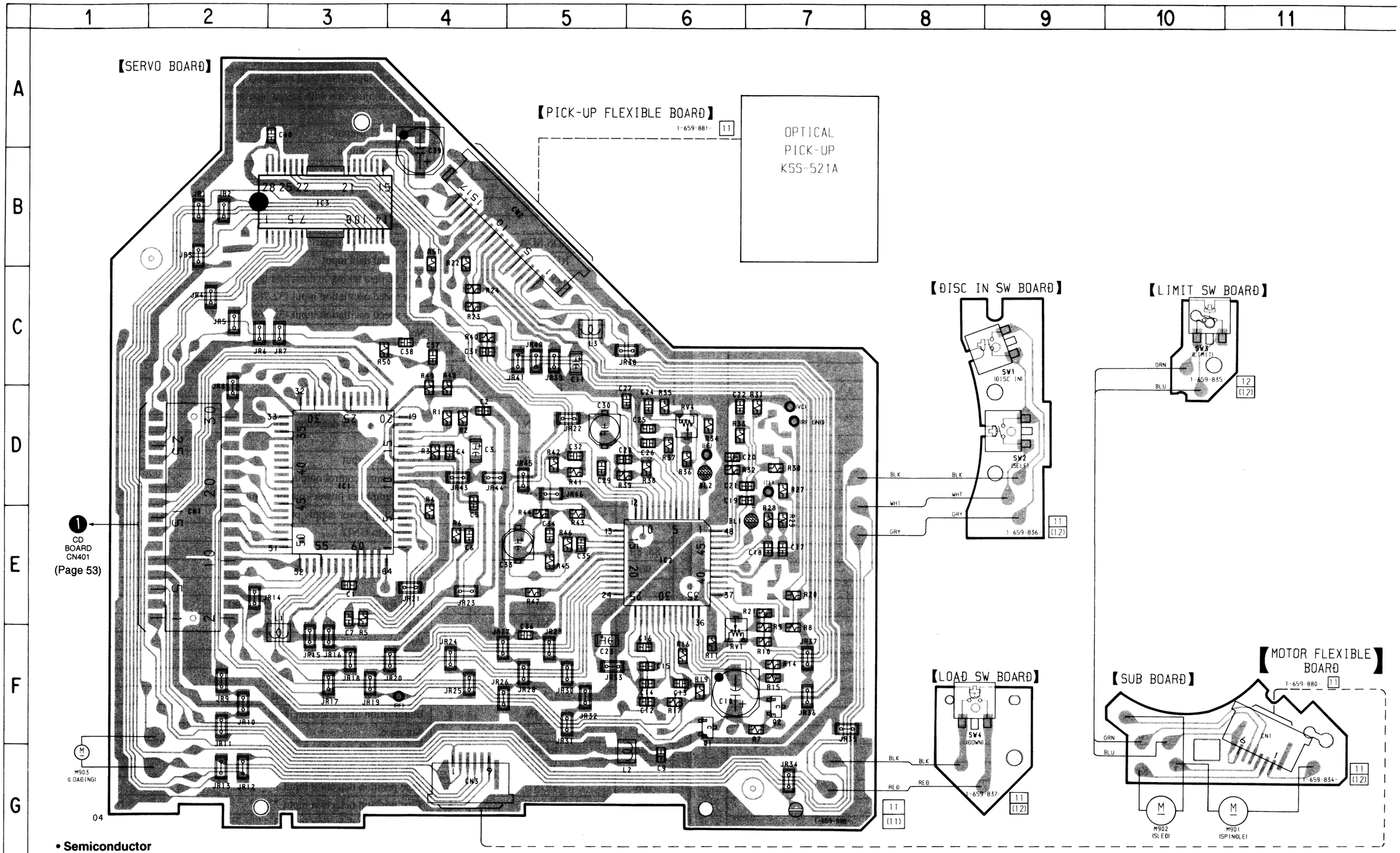
Pin No.	Pin Name	I/O	Pin Description
57	SD IN	I	Signal detector input
58	WIDE	O	WIDE/NARROW select output (Not used in this set.)
59	LED OE	O	LED driver control over write output
60	LED LCK	O	LED driver control serial latch output
61	AM ST	I	AM stereo input (Not used in this set.)
62	FM ST	I/O	Used in conjunction with stereo input/monaural output (FM mode)
63	VSS	—	GND
64	SEEK OUT	O	SEEK OUT output
65	TU MUTE	O	Tuner mute output
66	VOL SO	O	Electric volume serial data output
67	VOL CKO	O	Electric volume serial clock output
68	VOL CE	O	Electric volume serial chip enable output
69	—	—	Not used.
70	RDS SDA	I	RDS serial clock input
71	RDS SCL	I	RDS serial data input
72	RDS DAVN	I	RDS IC data taking in detection input
73	X1A	—	Low speed oscillation input (32.768 kHz)
74	X0A	—	Low speed oscillation input (32.768 kHz)
75	—	—	Not used.
76	KEY ACK	I	Key input acknowledge
77	BU IN	I	Back-up power detection input
78	RC IN1	I	Rotary commander input
79, 80	—	—	Not used.
81	ACC IN	I	Accessory power detection input
82	—	—	Not used.
83	AF SEEK	O	AF SEEK output
84	MUTE	O	System mute control output
85	AMP ON	O	Power amplifier power control output
86	HSTX	—	Connect to power supply pin.
87	MD2	—	Connect to GND.
88, 89	MD0, 1	—	Connect to power supply pin.
90	RESET	I	Microcomputer reset input
91	VSS	—	GND
92	X0	—	High speed oscillation input (3.68 MHz)
93	X1	—	High speed oscillation input (3.68 MHz)
94	VCC	—	Power supply pin (+5 V)
95 – 99	—	—	Not used.
100	TEST	I	Test mode setting detection input
101	TEL MUTE	I	Telephone mute detection input
102	ILL IN	I	Illumination line detection input
103	—	—	Not used.
104	REEL	I	Tape reel table rotation detection input
105	POS0	I	Tape position detection input 0
106	POS1	I	Tape position detection input 1
107	POS2	I	Tape position detection input 2
108	POS3	I	Tape position detection input 3
109	TAPE MUTE	O	Tape mute output
110	AM IN	I	AM stereo detection input
111	F ROUT	O	Tape forward/reverse detection output
112	AMS ON	O	Tape AMS control output
113	MTL ON	I	Auto METAL detection input
114	DOL ON	O	Tape DOLBY control output

Pin No.	Pin Name	I/O	Pin Description
115	DOL B/C	O	Tape DOLBY B/C select control output (Not used in this set.)
116	FM ON	O	FM ON output
117	TU ON	O	Tuner ON output
118	P-ON	O	System power control output
119	VSS	—	GND
120	—	—	Not used.

6-5. CIRCUIT BOARDS LOCATION



6-6. PRINTED WIRING BOARDS — CD MECHANISM SECTION —



• **Semiconductor Location**

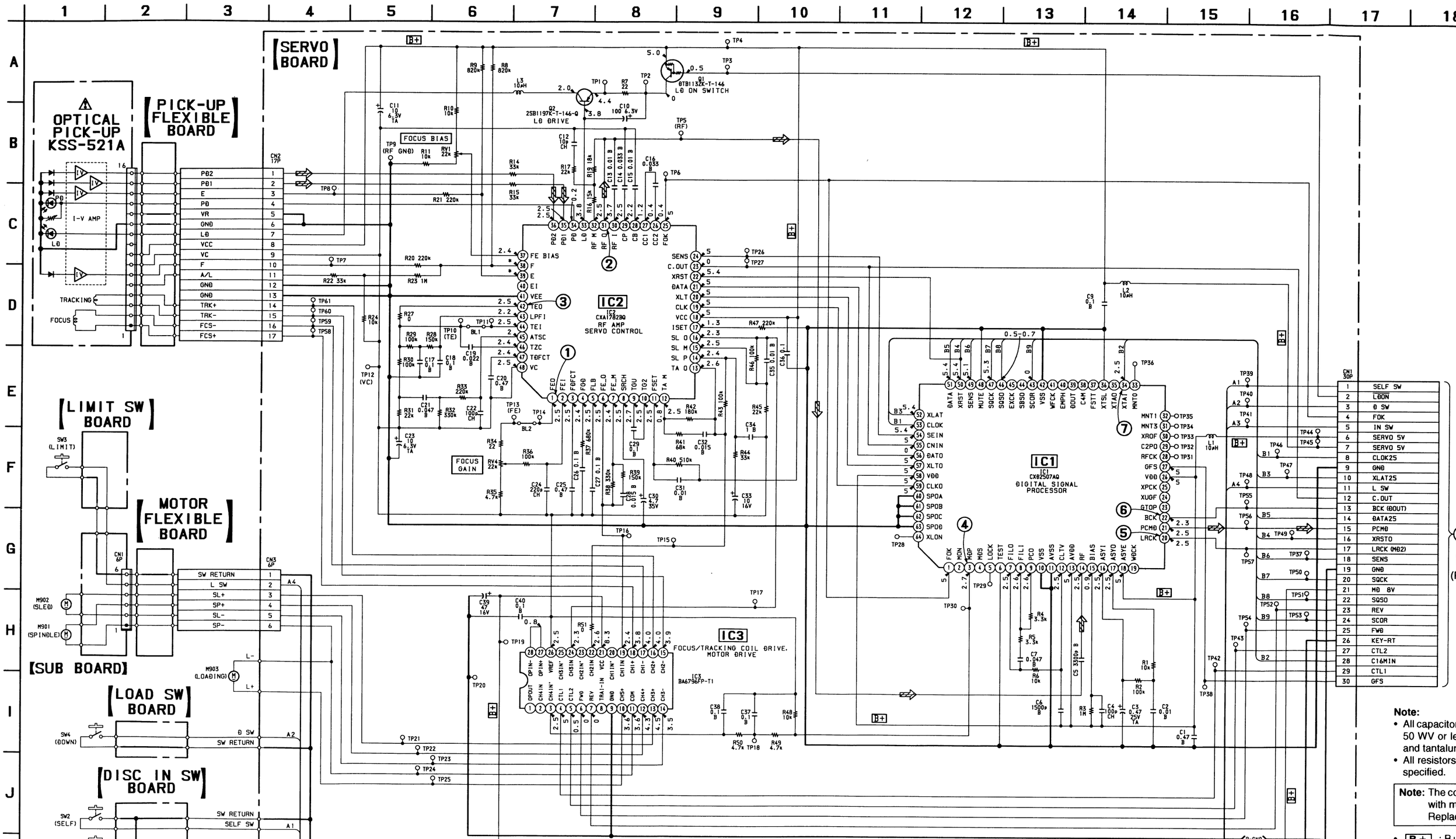
Ref. No.	Location
IC1	D-3
IC2	E-6
IC3	B-3
Q1	F-6
Q2	F-7

Note:

• ——— : parts extracted from the conductor side.

• ▒▒▒ : Pattern from the side which enables seeing.

6-7. SCHEMATIC DIAGRAM — CD MECHANISM SECTION — • Refer to page 69 for IC Block Diagrams.

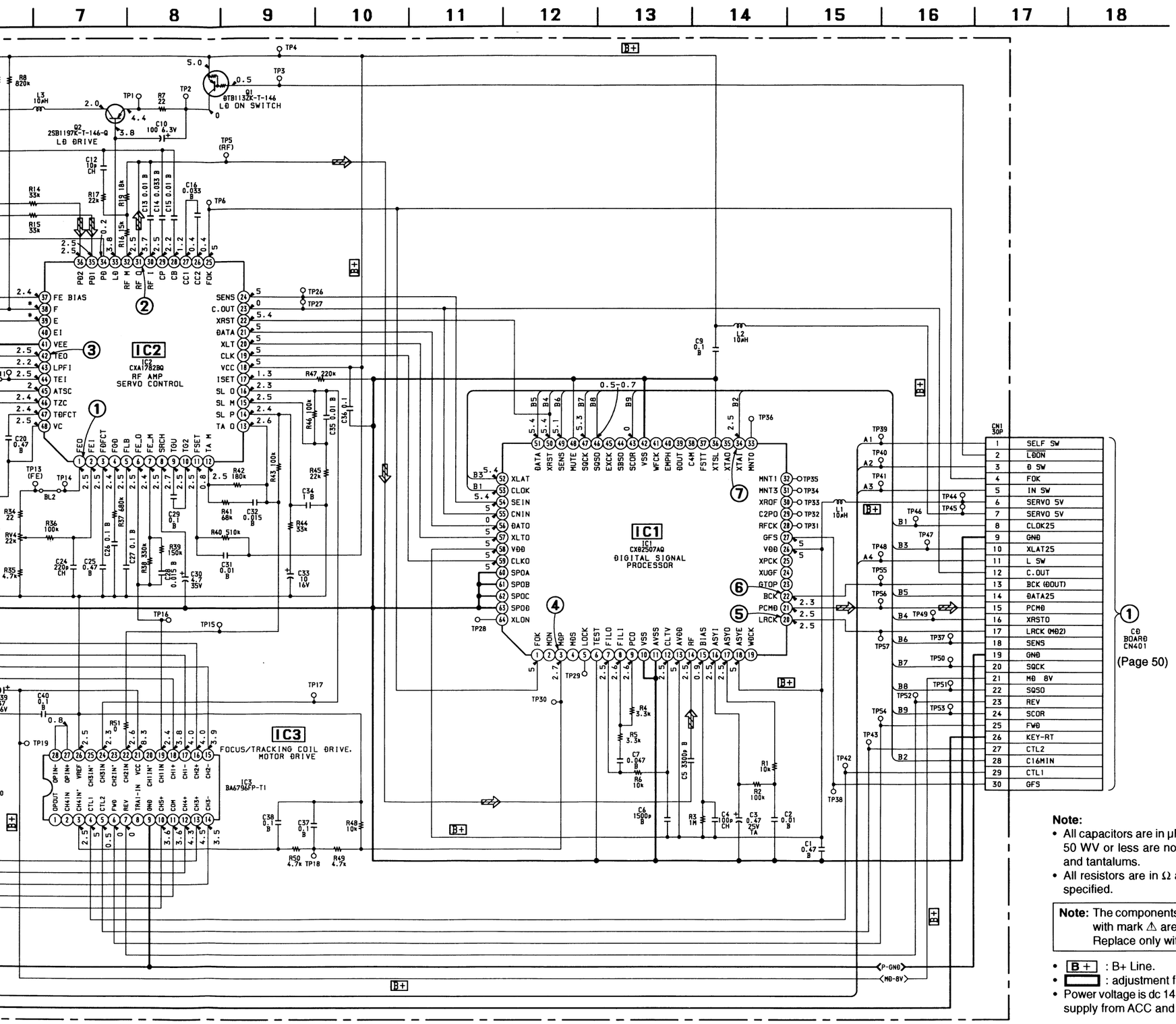


Note:
- All capacitors 50 WV or less and tantalums
- All resistors a specified.

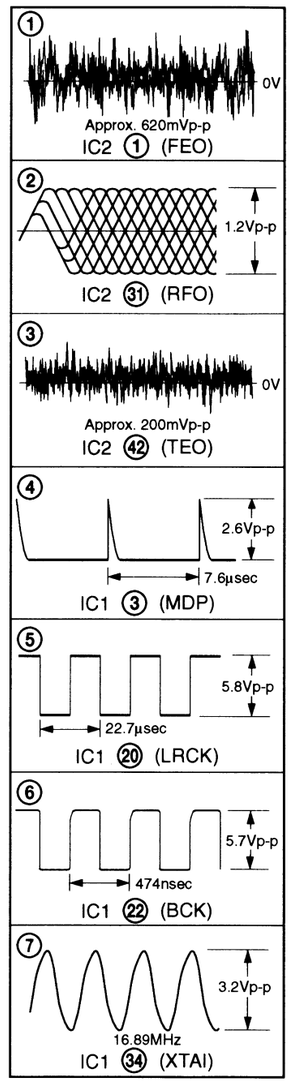
Note: The com with mar Replace

- B+ : B+ L
- : adjus
- Power voltage supply from A

or IC Block Diagrams.



• **Waveforms** (MODE:PLAY)



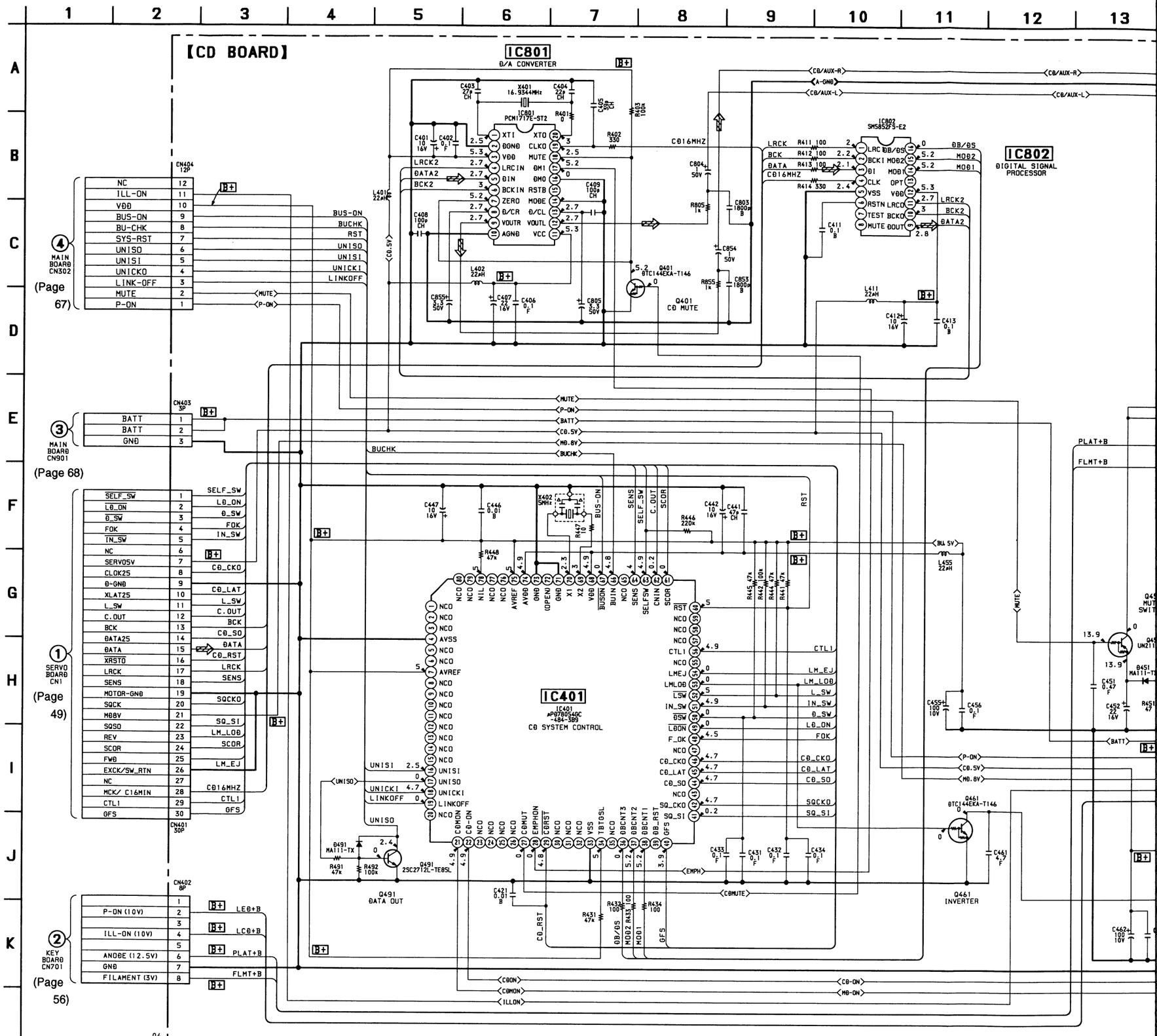
Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

6-8. SCHEMATIC DIAGRAM — CD SECTION — • Refer to page 69 for IC Block Diagrams.



Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage is dc with respect to ground under no-signal condition.
  no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : CD

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19

【CD BOARD】

IC801
Ø/A CONVERTER
PCM1717E-ST2

IC802
SM5852F5-E2

IC802
ØIGITAL SIGNAL PROCESSOR

IC401
IC401
▲P0780540C
-486-389
CØ SYSTEM CONTROL

CN404 12P
NC 12
ILL-ON 11
VØØ 10
BUS-ON 9
BU-CHK 8
SYS-RST 7
UNISO 6
UNISI 5
UNICKO 4
LINK-OFF 3
MUTE 2
P-ON 1
(4) MAIN BOARØ CN302 (Page 67)

CN403 3P
BATT 1
BATT 2
GNØ 3
(3) MAIN BOARØ CN901 (Page 68)

CN402 8P
SELF_SW 1
LØ_ON 2
Ø_SW 3
FOK 4
IN_SW 5
NC 6
SERVO5V 7
CLOK25 8
Ø-GNØ 9
XLAT25 10
L_SW 11
C.OUT 12
BCK 13
ØATA25 14
ØATA 15
XRSTO 16
LRCK 17
SENS 18
MOTOR-GNØ 19
SQCK 20
MØ8V 21
SQSO 22
REV 23
SCOR 24
FWØ 25
EXCK/SW_RTN 26
NC 27
MCK/ C16MIN 28
CTL1 29
GFS 30
(1) SERVO BARØ CN1 (Page 49)

CN402 8P
P-ON (10V) 2
ILL-ON (10V) 4
ANOBE (12.5V) 6
GNØ 7
FILAMENT (3V) 8
(2) KEY BARØ CN701 (Page 56)

CN802 8P
CØ-R 1
A-GNØ 2
CØ-L 3
FR-IN 4
RR-IN 5
A-GNØ 6
RL-IN 7
FL-IN 8
(5) MAIN BOARØ CN303 (Page 68)

CN803
-1 L LINE OUT FRONT
-2 R
-3 L LINE OUT REAR
-4 R

Q801, 802, 851, 852 MUTE
Q801 BTC314TK-T-146
Q851 BTC314TK-T-146
Q802 BTC314TK-T-146
Q852 BTC314TK-T-146
Q801 MA8036-L-TX
Q851 MA8036-L-TX

Q481 +3V REG
Q481 2502394-Q
Q483 11E52-TA1B
Q482, 483 FL POWER CONTROL
Q482 2SB1132-T101-R
Q483 2SC2712L-TE85L
R481 MA8033-L-TX
R482 MA111-TX

Q451 MUTE SWITCH
Q451 UN2112-TX
R451 MA111-TX
Q471 2SB1132-T101-R
Q473 2502394-G +10V REG
Q474 ILL POWER CONTROL
Q474 XN1A312-TX
Q472 UN2211-TX
Q471 MA8100-M-TX

Q471, 472 LEØ POWER CONTROL

Q462 +5V REG
Q462 2502394-G
Q463 CØ POWER CONTROL
Q463 XN1A312-TX
Q464 +8V REG
Q464 2502394-G
Q465 CØ POWER CONTROL
Q465 XN1A312-TX
R461 MA8054-L-TX
R462 MA8091-L-TX

Q491 ØATA OUT
Q491 MA111-TX
Q491 2SC2712L-TE85L

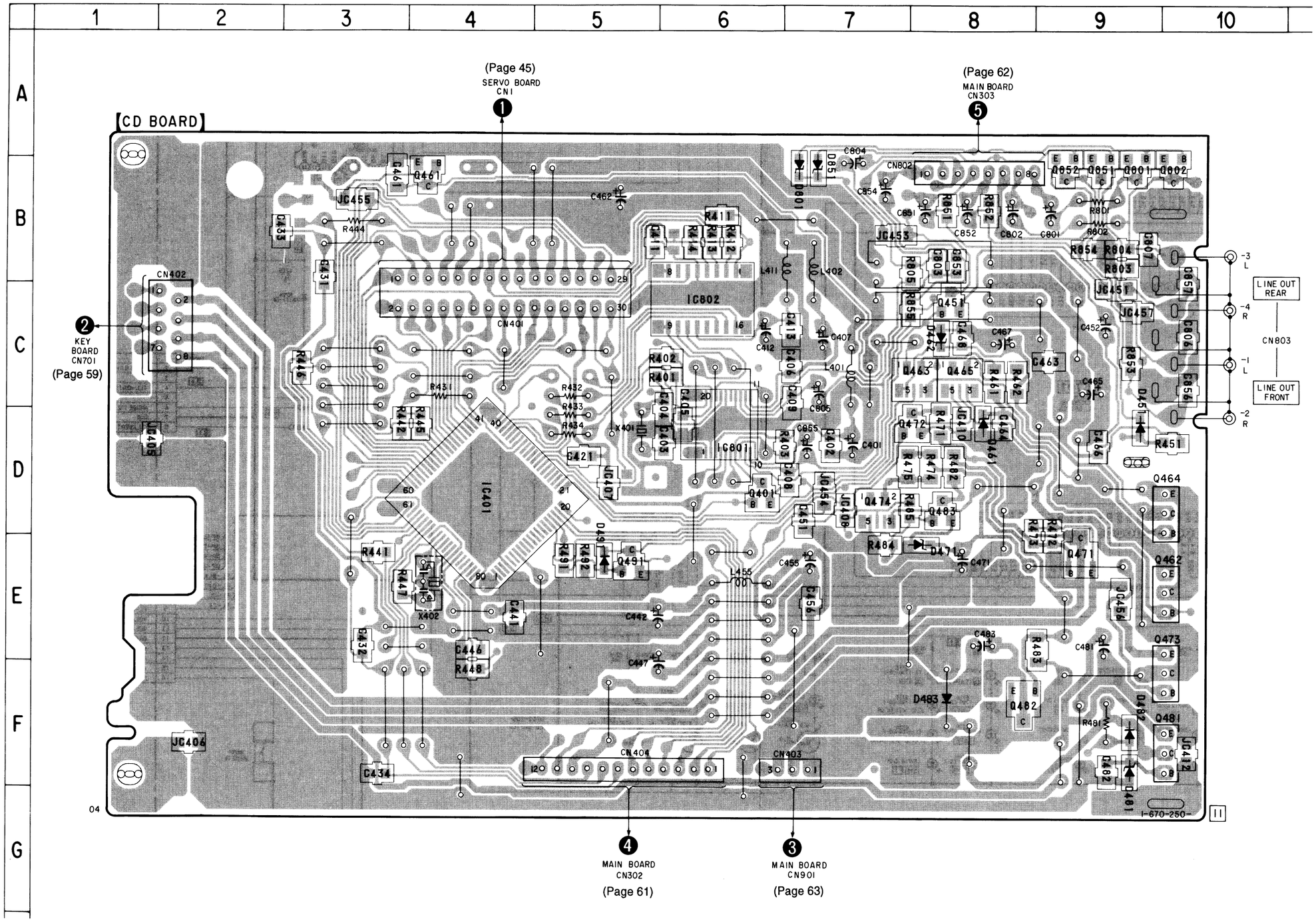
Q461 INVERTER
Q461 BTC144EKA-T146

Q401 CØ MUTE
Q401 BTC144EKA-T146

X401 16.9344MHz
X402 5MHz

BUCHK
RST
UNISO
UNISI
UNICKI
LINKOFF
MUTE
P-ON
BATT
CØ.5V
MØ.8V
SELF_SW
LØ_ON
Ø_SW
FOK
IN_SW
CØ_CKO
CØ_LAT
L_SW
C.OUT
BCK
CØ_SO
ØATA
CØ_RST
LRCK
SENS
SQCKO
SQ_SI
LM_LOØ
SCOR
LM_EJ
CØ16MHZ
CTL1
GFS
LE0+B
PLAT+B
FLMT+B
CØON
CØMON
ILLON
CØ-ON
MØ-ON
PS-ONØ
ILL-ON
EMPH
CØMUTE
BUS-ON
BL 5V

6-9. PRINTED WIRING BOARD — CD SECTION —



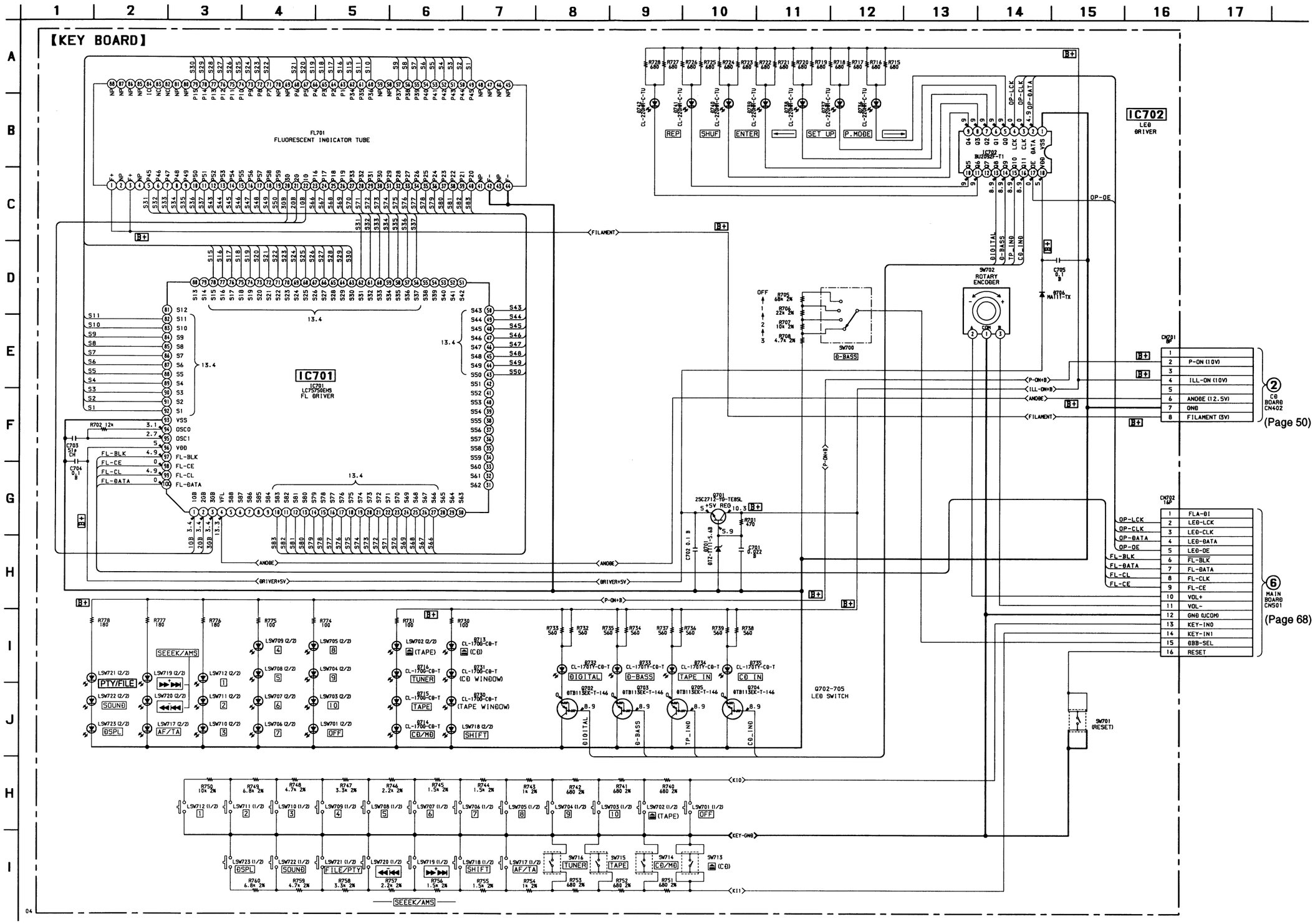
Note:

- ⚬——— : parts extracted from the component side.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.

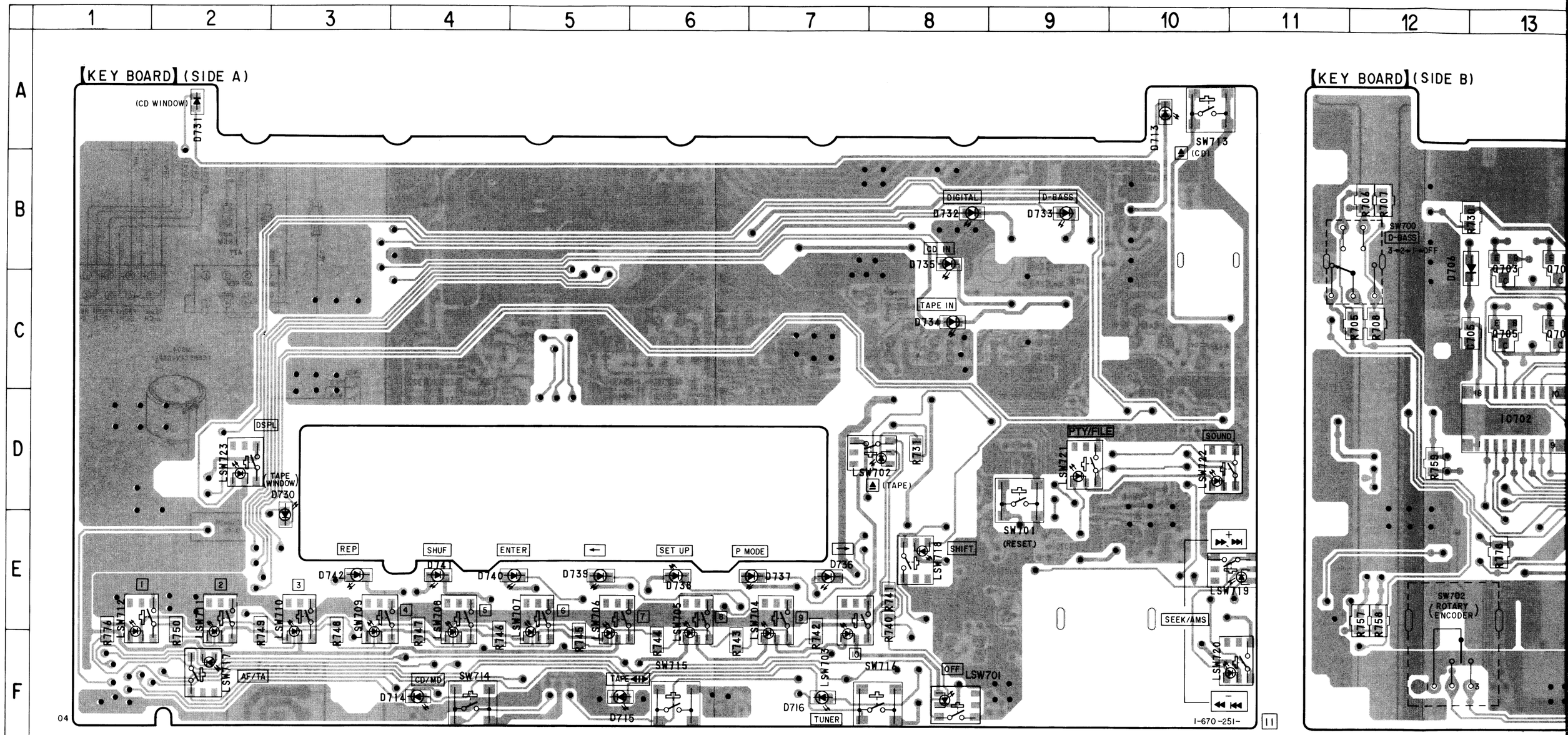
• **Semiconductor Location**

Ref. No.	Location
D451	C-9
D461	D-8
D462	C-8
D471	E-8
D481	F-9
D482	F-9
D483	F-8
D491	E-5
D801	B-7
D851	B-7
IC401	D-4
IC801	D-6
IC802	C-6
Q401	D-6
Q451	C-8
Q461	B-4
Q462	E-9
Q463	C-7
Q464	D-9
Q465	C-8
Q471	E-9
Q472	D-7
Q473	E-9
Q474	D-7
Q481	F-9
Q482	F-8
Q483	D-8
Q491	E-5
Q801	B-9
Q802	B-9
Q851	B-9
Q852	B-9

6-10. SCHEMATIC DIAGRAM — CONTROL SECTION — • Refer to page 71 for IC Block Diagrams.



6-11. PRINTED WIRING BOARD — CONTROL SECTION —

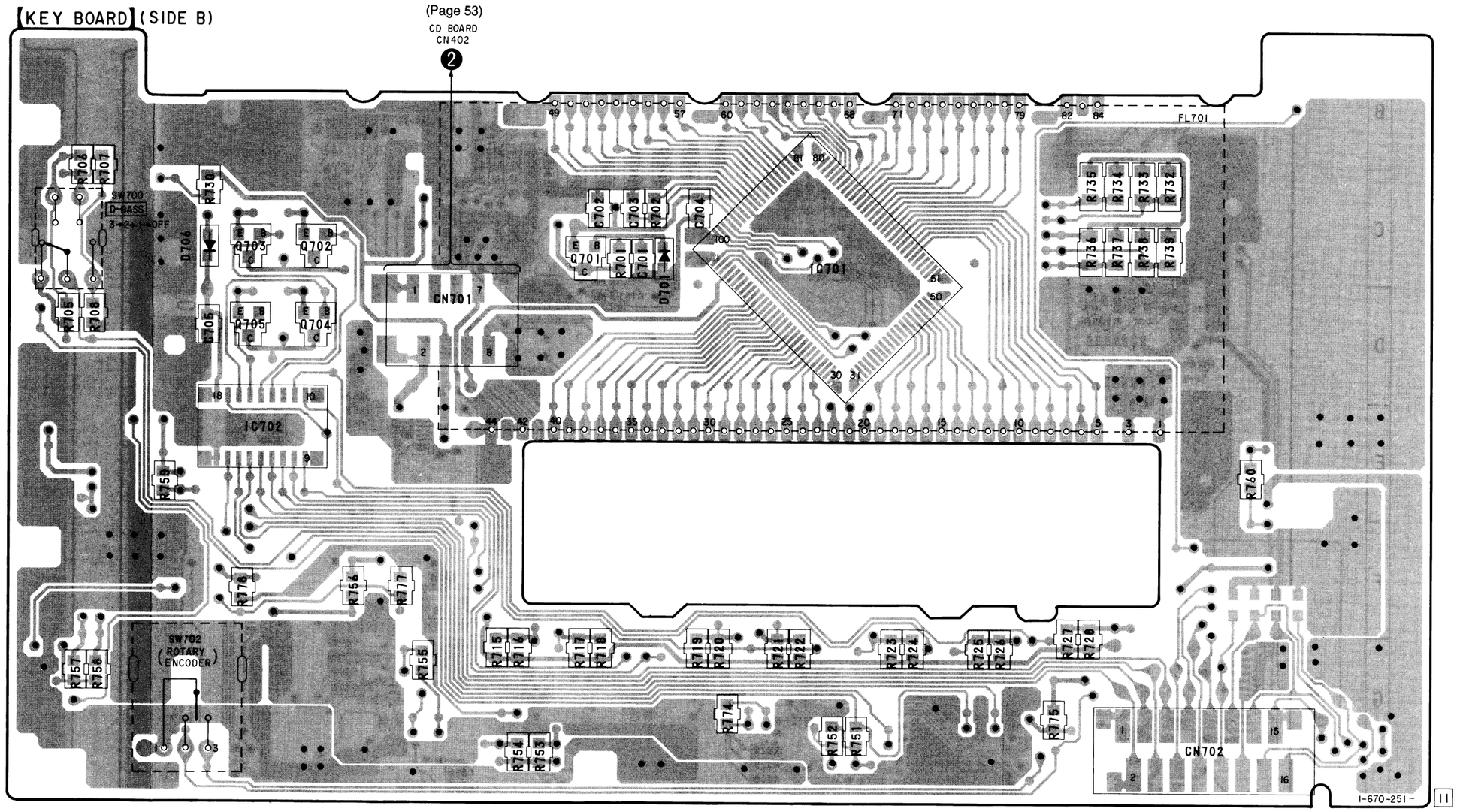


Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- [ ] : panel designation.
- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage is dc with respect to ground under no-signal condition.
  no mark : TEST mode (See page 28.)
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.

11	12	13	14	15	16	17	18	19	20	21

【KEY BOARD】(SIDE B)



- **Semiconductor Location**

Ref. No.	Location
D701	C-16
D706	B-12
D713	A-10
D714	F-4
D715	F-5
D716	F-7
D730	D-3
D731	A-2
D732	B-8
D733	B-9
D734	C-8
D735	B-8
D736	E-7
D737	E-7
D738	E-6
D739	E-5
D740	E-4
D741	E-4
D742	E-3
IC701	C-17
IC702	D-13
Q701	C-15
Q702	B-13
Q703	B-13
Q704	C-13
Q705	C-13

Note on Printed Wiring Boards:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern from the side which enables seeing.
  (The other layers' patterns are not indicated.)

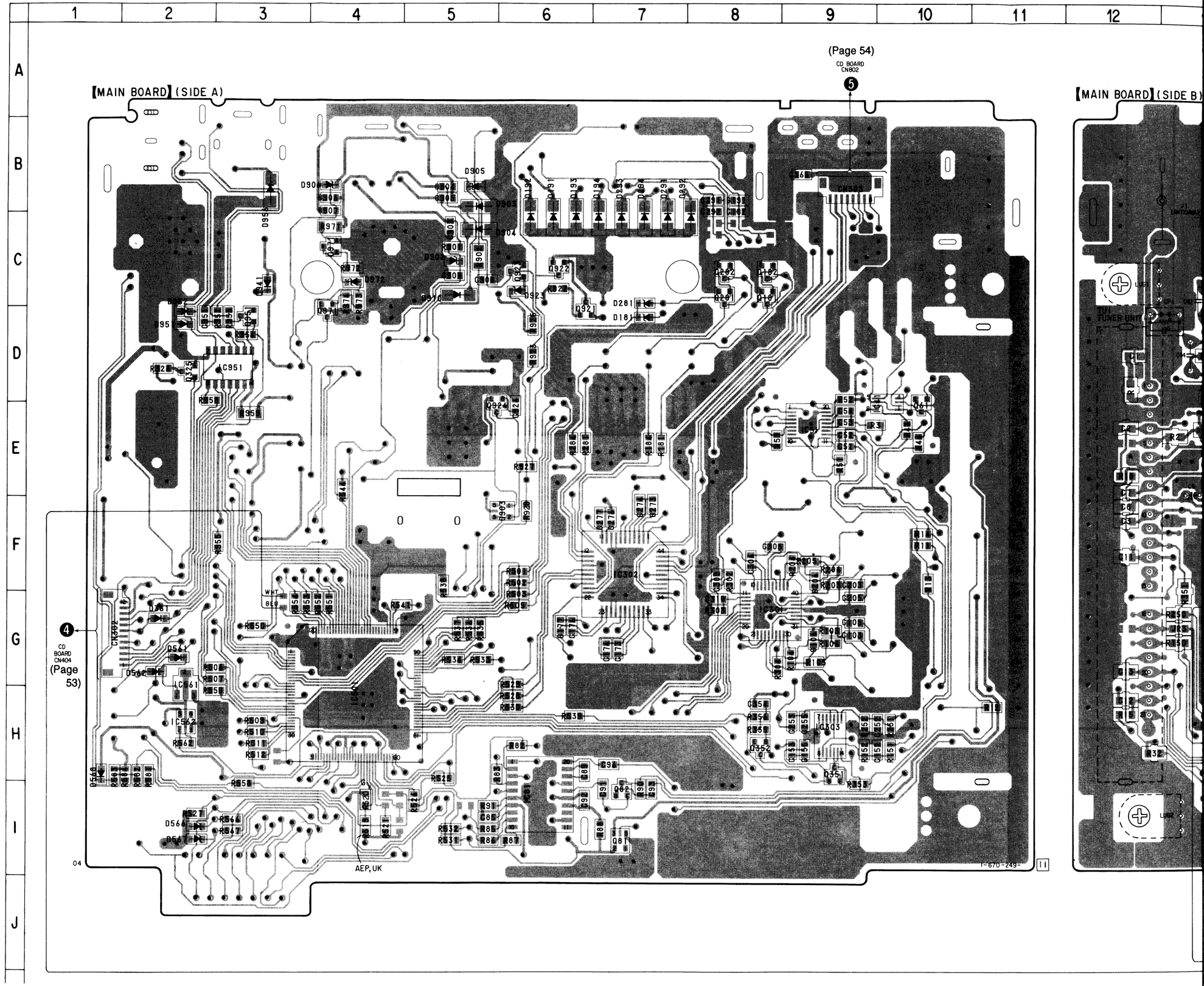
6-12. PRINTED WIRING BOARD — MAIN SECTION —

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D1	F-13	D1000	H-23
D71	E-14		
D181	D-7	IC41	D-9
D191	B-6	IC51	E-9
D192	B-6	IC81	I-6
D193	B-6	IC301	G-8
D194	B-6	IC302	F-7
D281	C-7	IC303	H-9
D291	B-7	IC306	B-16
D292	B-7	IC321	E-20
D293	B-7	IC501	G-4
D294	B-7	IC561	G-2
D301	F-14	IC562	H-2
D321	C-21	IC901	D-18
D322	E-21	IC941	C-19
D323	E-21	IC951	D-3
D324	D-21		
D361	G-2	Q31	H-13
D561	G-2	Q41	E-13
D562	G-2	Q61	D-10
D563	D-19	Q71	E-14
D564	E-19	Q81	I-7
D565	I-20	Q82	I-7
D566	I-2	Q151	H-14
D567	I-2	Q181	C-8
D568	H-1	Q182	C-8
D569	E-19	Q251	H-14
D571	I-21	Q281	C-8
D581	B-21	Q282	C-8
D582	B-21	Q321	F-21
D901	B-19	Q322	E-21
D902	C-5	Q323	E-21
D903	B-5	Q324	D-21
D904	C-5	Q325	D-2
D905	B-5	Q351	H-9
D906	B-4	Q352	H-8
D907	D-18	Q561	H-21
D908	E-18	Q562	H-21
D910	C-5	Q591	G-21
D921	C-16	Q901	E-18
D923	C-6	Q902	E-19
D924	E-17	Q903	F-5
D941	C-3	Q921	C-6
D951	D-2	Q922	C-6
D952	C-2	Q923	C-6
D953	D-20	Q924	D-5
D954	D-20	Q951	D-3
D955	D-20	Q952	D-20
D956	B-3	Q971	C-4
D971	C-4	Q1001	H-23
D972	C-4		

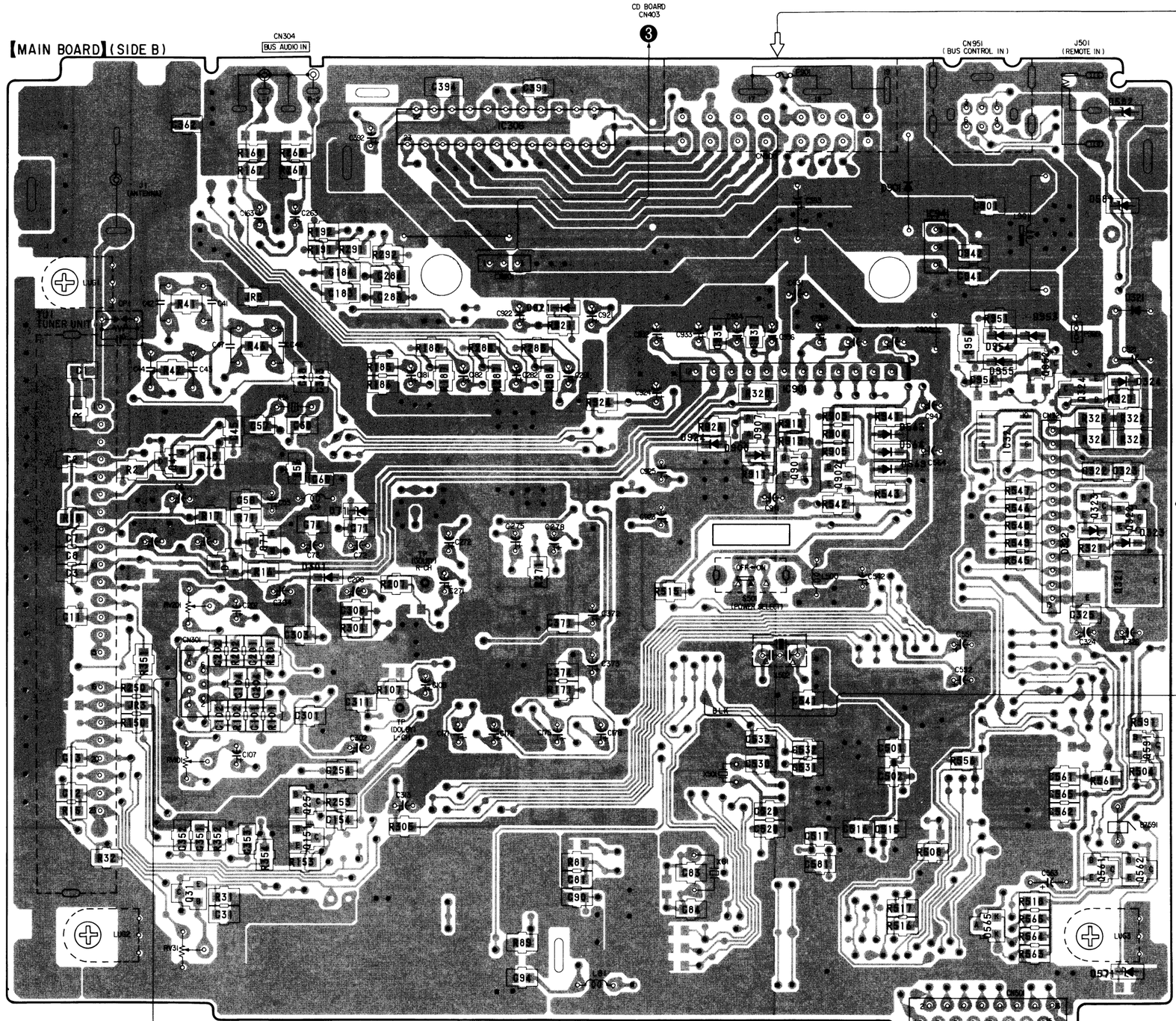
Note:

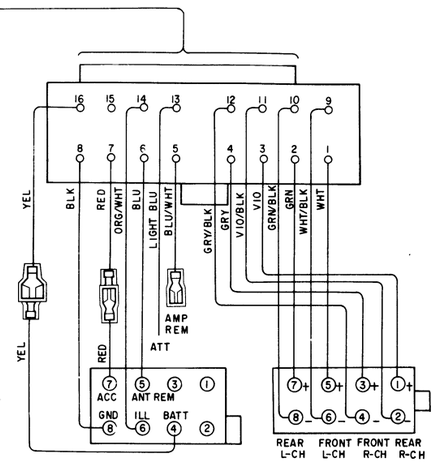
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ● : Through hole.
- △ : internal component.
- ▒▒ : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)
- Abbreviation
  G : German model.

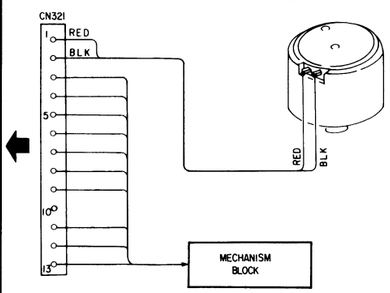


(Page 54)

【MAIN BOARD】(SIDE B)

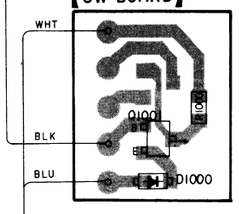


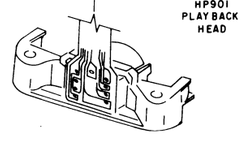




M904
(CAPSTAN/REEL)

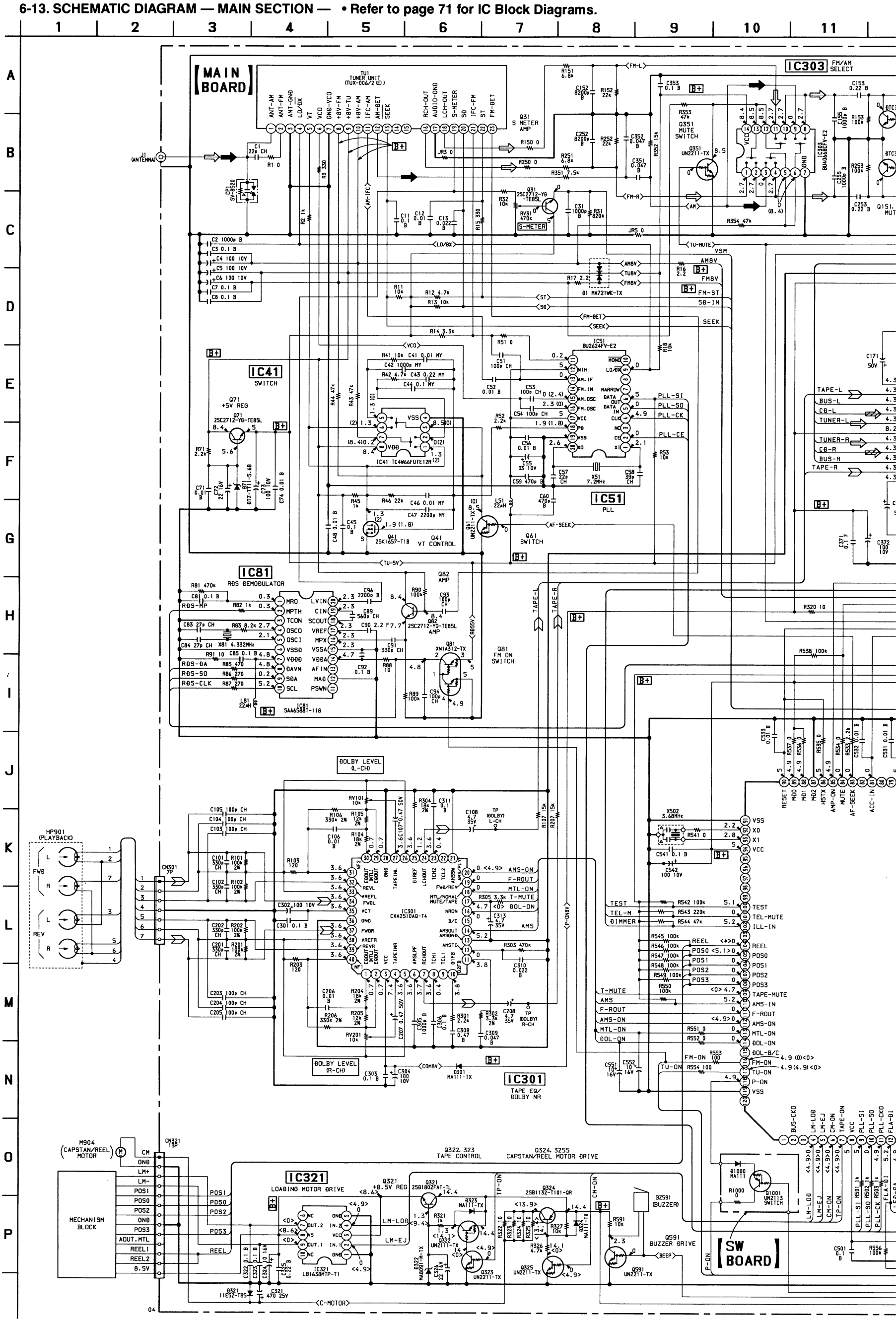
【SW BOARD】





❻ KEY BOARD CN702 (Page 60)

6-13. SCHEMATIC DIAGRAM — MAIN SECTION — • Refer to page 71 for IC Block Diagrams.



ams.

8 9 10 11 12 13 14 15 16 17 18 19 20 21 22

IC303 FM/AM SELECT

IC302 ELECTRONIC VOLUME

IC501 MB90574PFV -G-118-BND SYSTEM CONTROL

IC51 PLL

IC561 RESET IC561

IC562 RAM RESET

IC941 +6V REG

IC951 BUS INTERFACE

Q352 MUTE SWITCH

Q351 MUTE SWITCH

Q151, 252 MUTE

Q924 MUTE SWITCH

Q901, 902 BUFFER

Q903 MUTE SWITCH

Q591 BUZZER DRIVE

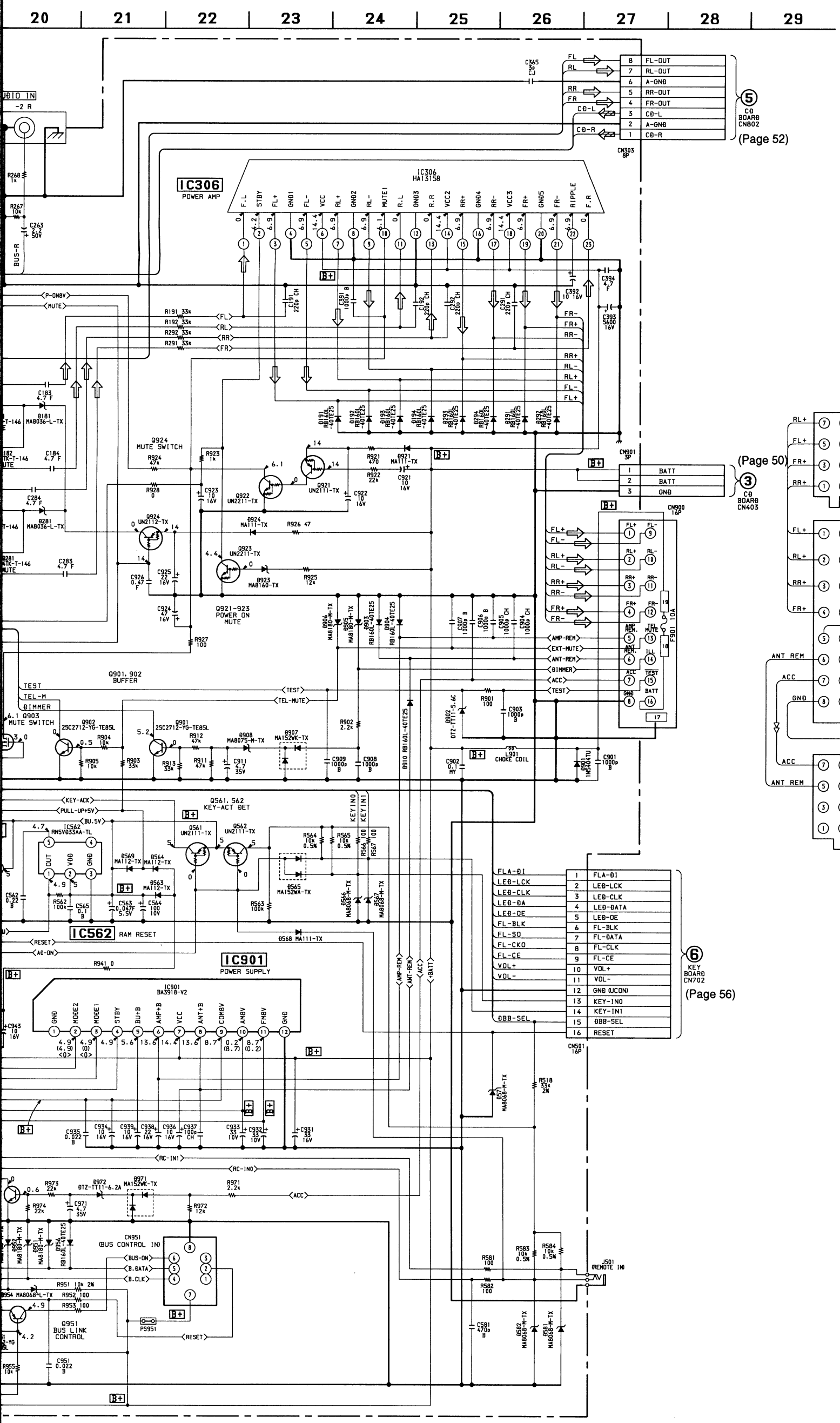
Q952 BACK UP CHECK

Q951 BUS LINK CONTROL

CD BOARD CN404 (Page 50)

BUS AUDIO IN

SW BOARD

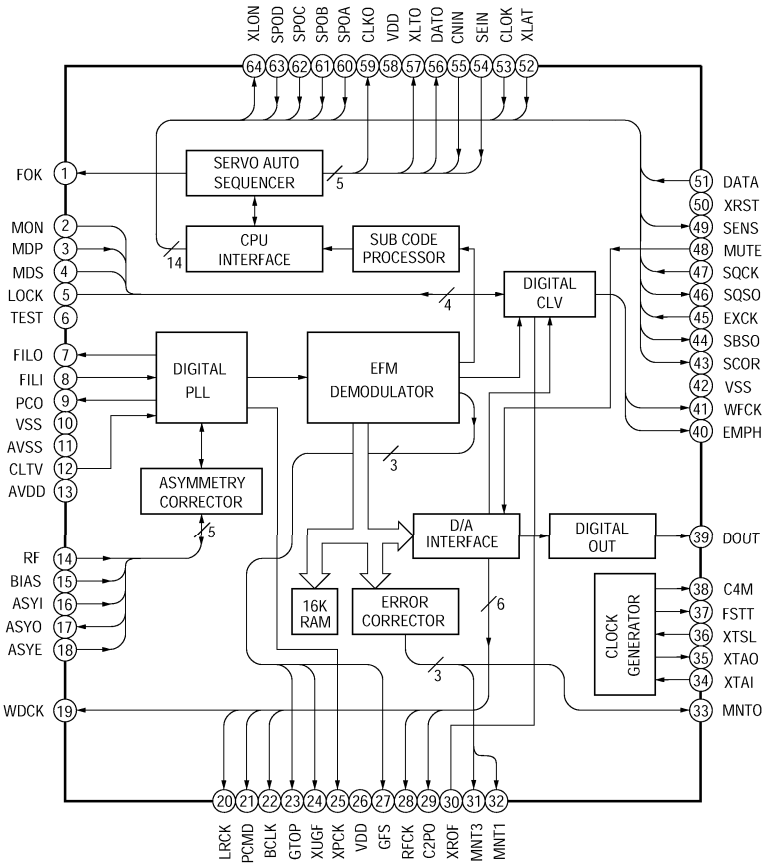


Note:

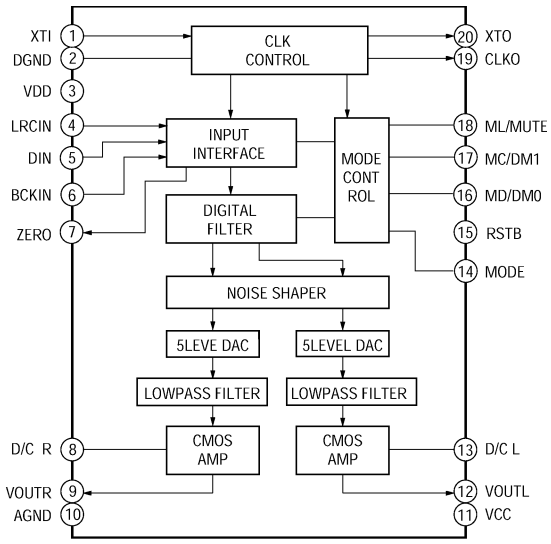
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- % : indicates tolerance.
- Δ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- ▬ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : MW
  < > : TAPE PLAY
  * : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : MW
  ⇨ : PB (TAPE)
  ⇨ : CD
- Abbreviation
  G : German model.

• IC Block Diagrams

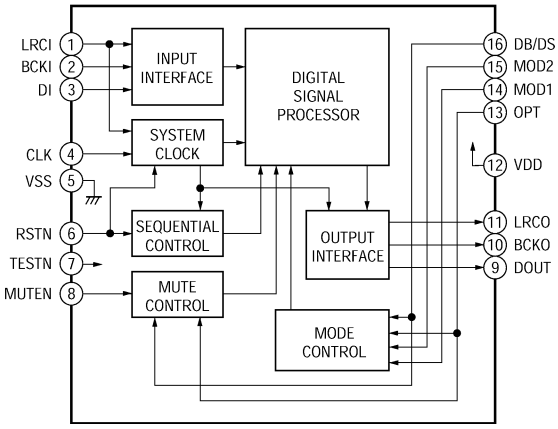
IC1 CXD2507AQ (SERVO BOARD)



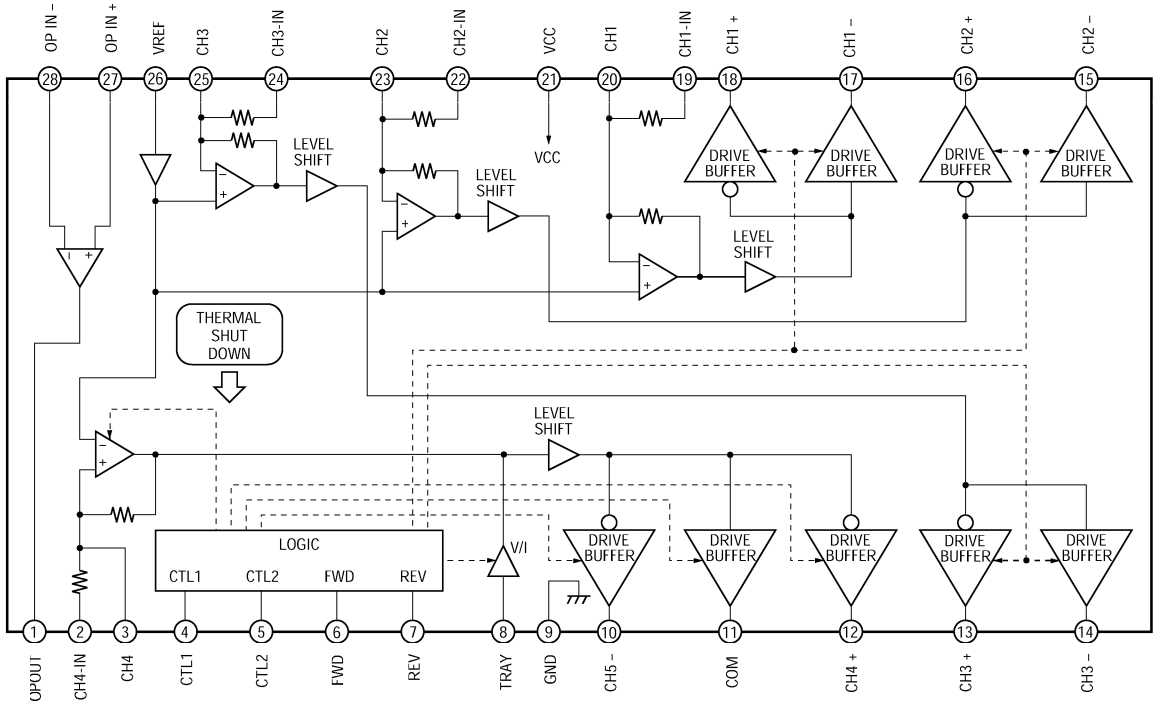
IC801 PCM1717E-ST2



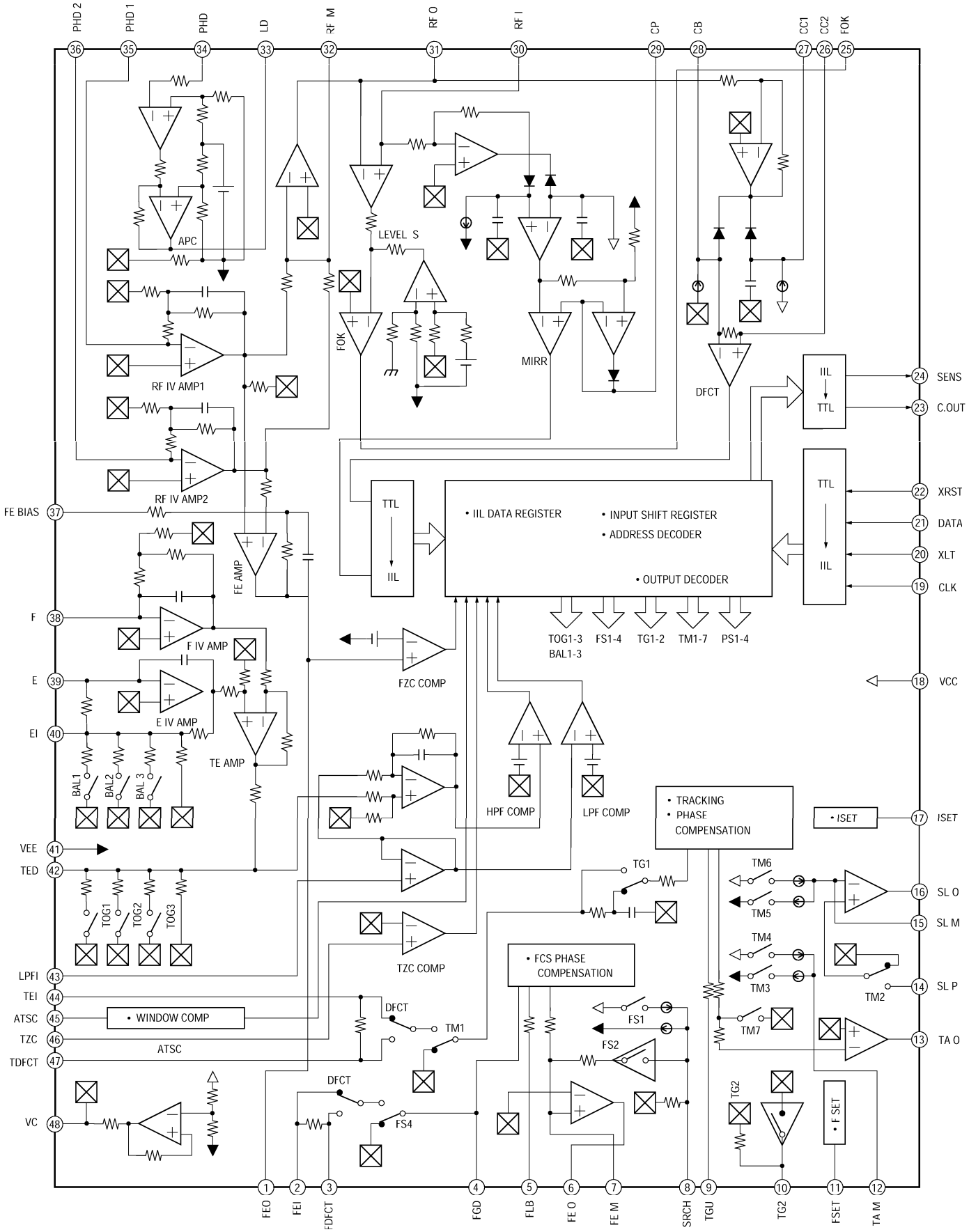
IC802 SM5852FS-E2



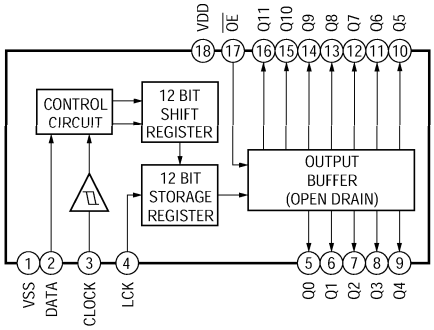
IC3 BA6796FP-T1



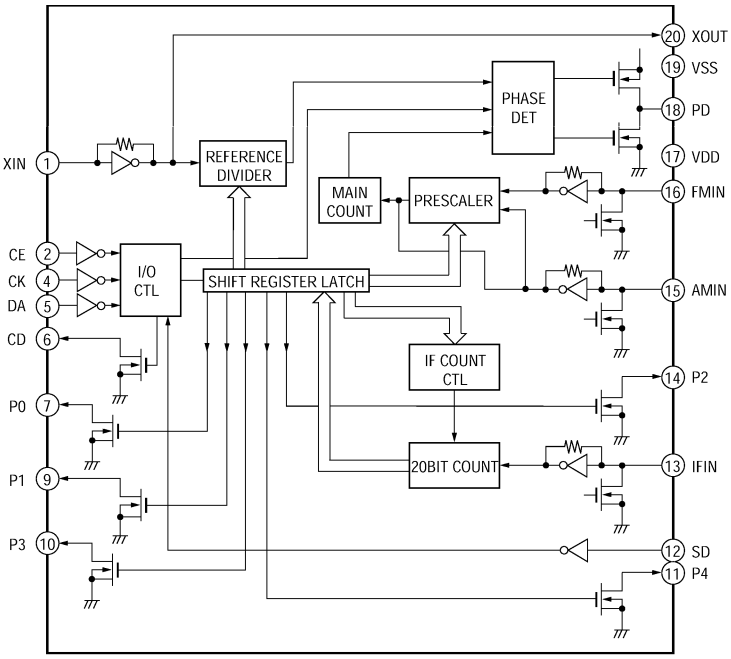
IC2 CXA1782BQ (SERVO BOARD)



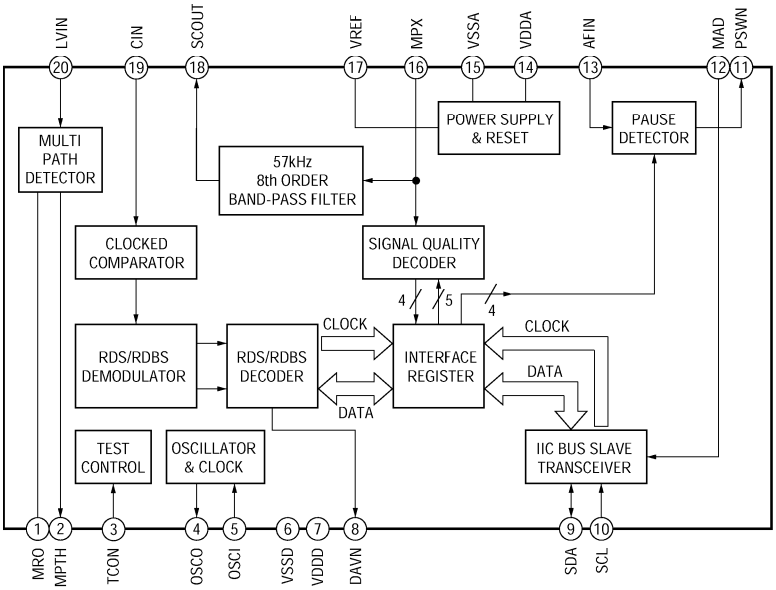
IC702 BU2092F-T1



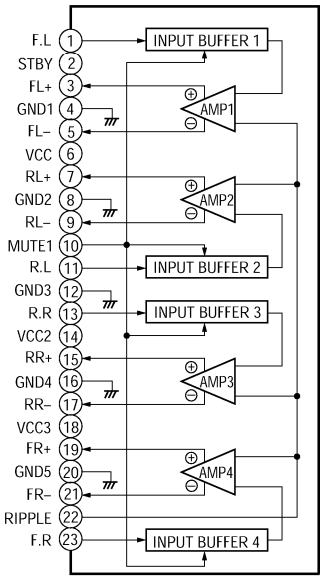
IC51 BU2624FV-E2



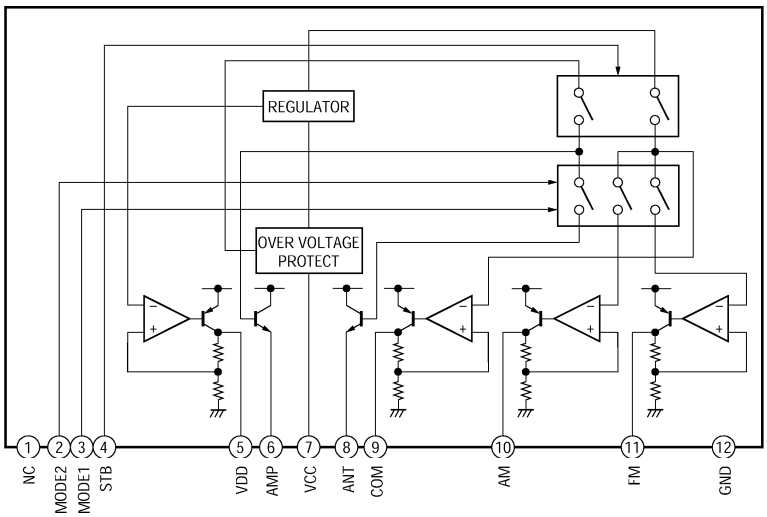
IC81 SAA6588T-118



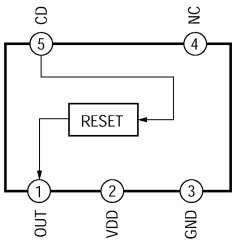
IC306 HA13158



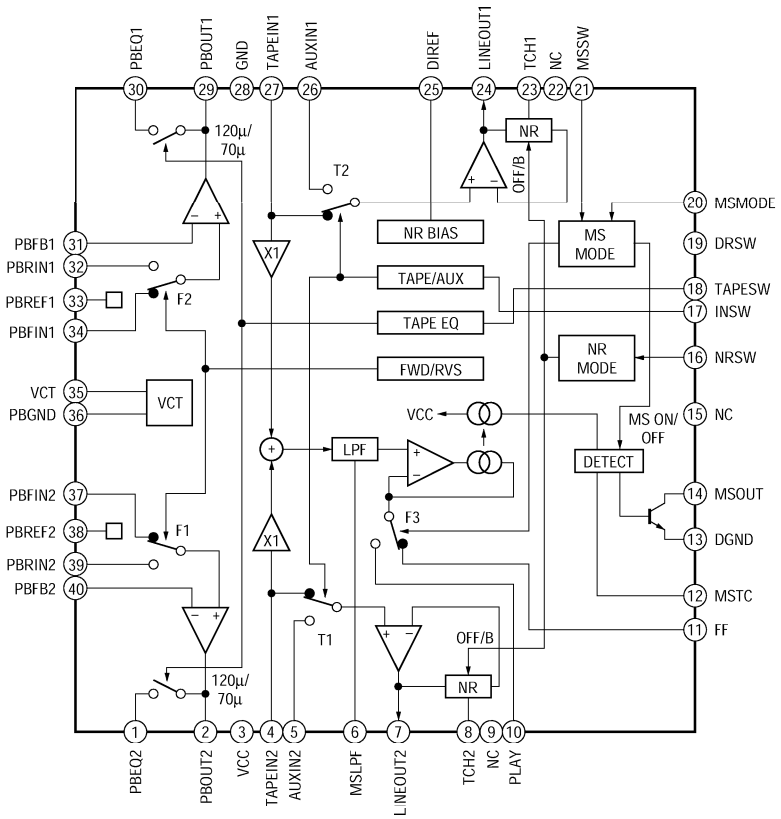
IC901 BA3918-V2



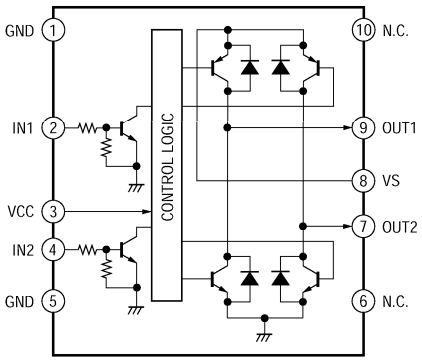
IC561 RN5VD33AA-TL



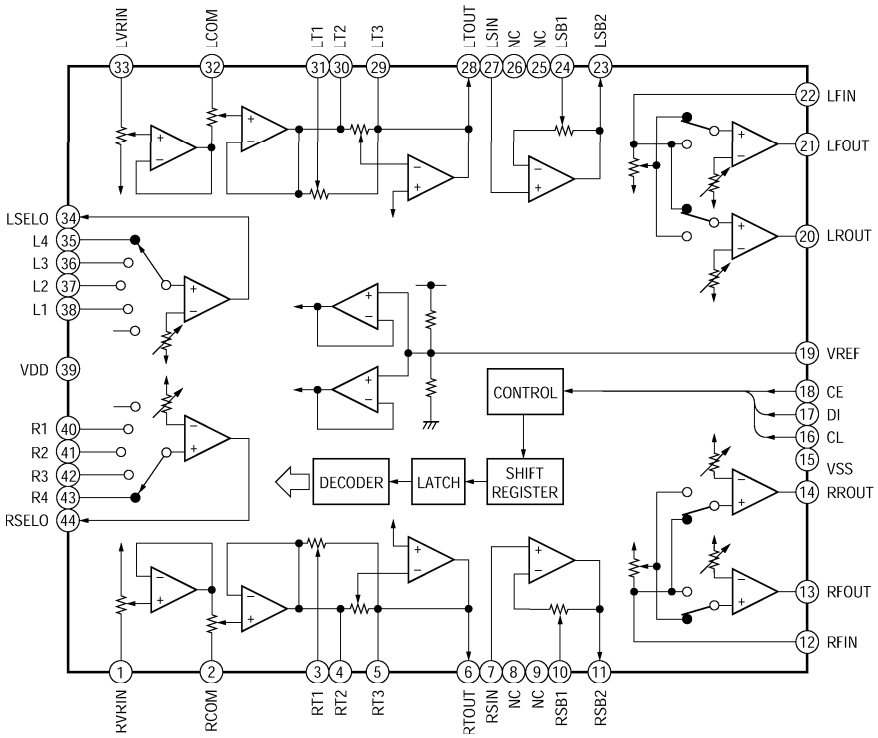
IC301 CXA2510AQ-T4



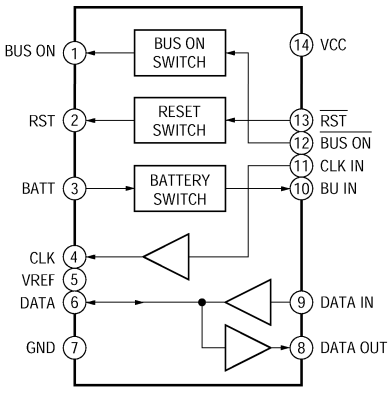
IC321 LB1638MTP-T1



IC302 LC75374E



IC951 BA8270F-E2



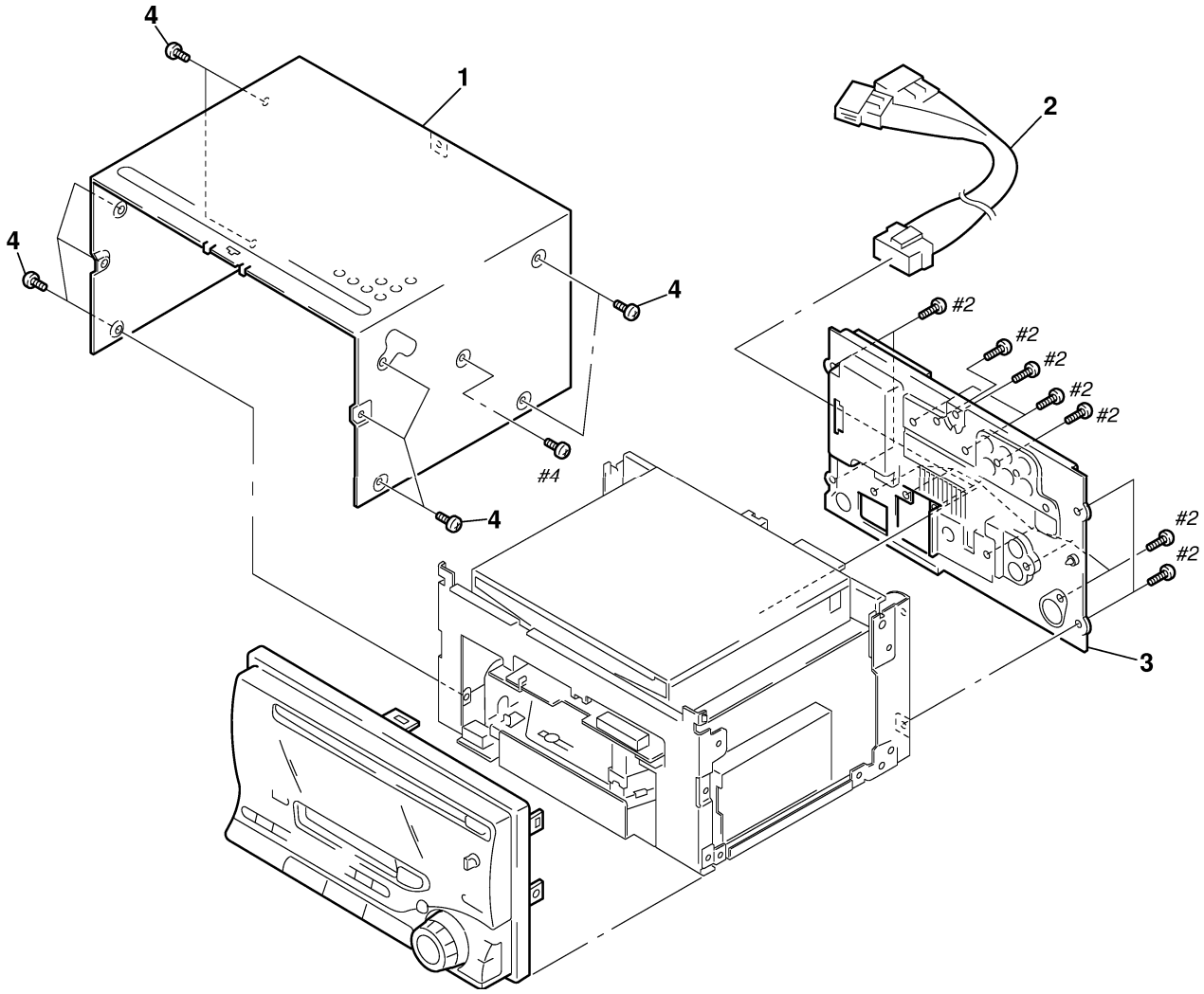
SECTION 7
EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example :
  KNOB, BALANCE (WHITE) ... (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Accessories and packing materials and hardware (# mark) list are given in the last of this parts list.

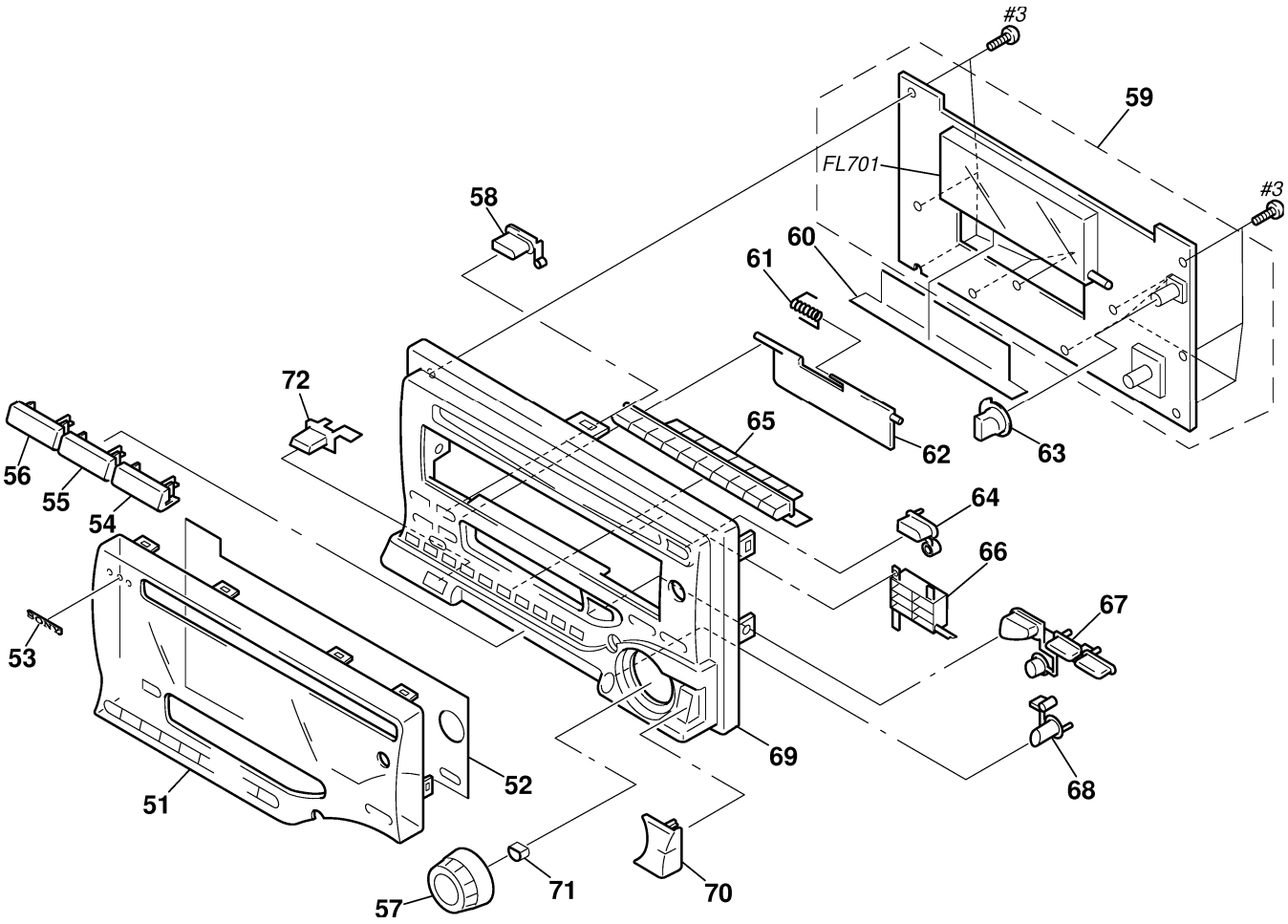
The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

7-1. COVER SECTION



Ref. No.	Part No.	Description	Remark
* 1	3-012-507-01	COVER	
2	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	
* 3	3-012-508-22	HEAT SINK	
4	3-919-171-01	SCREW (2.6X6) (C TIGHT)	

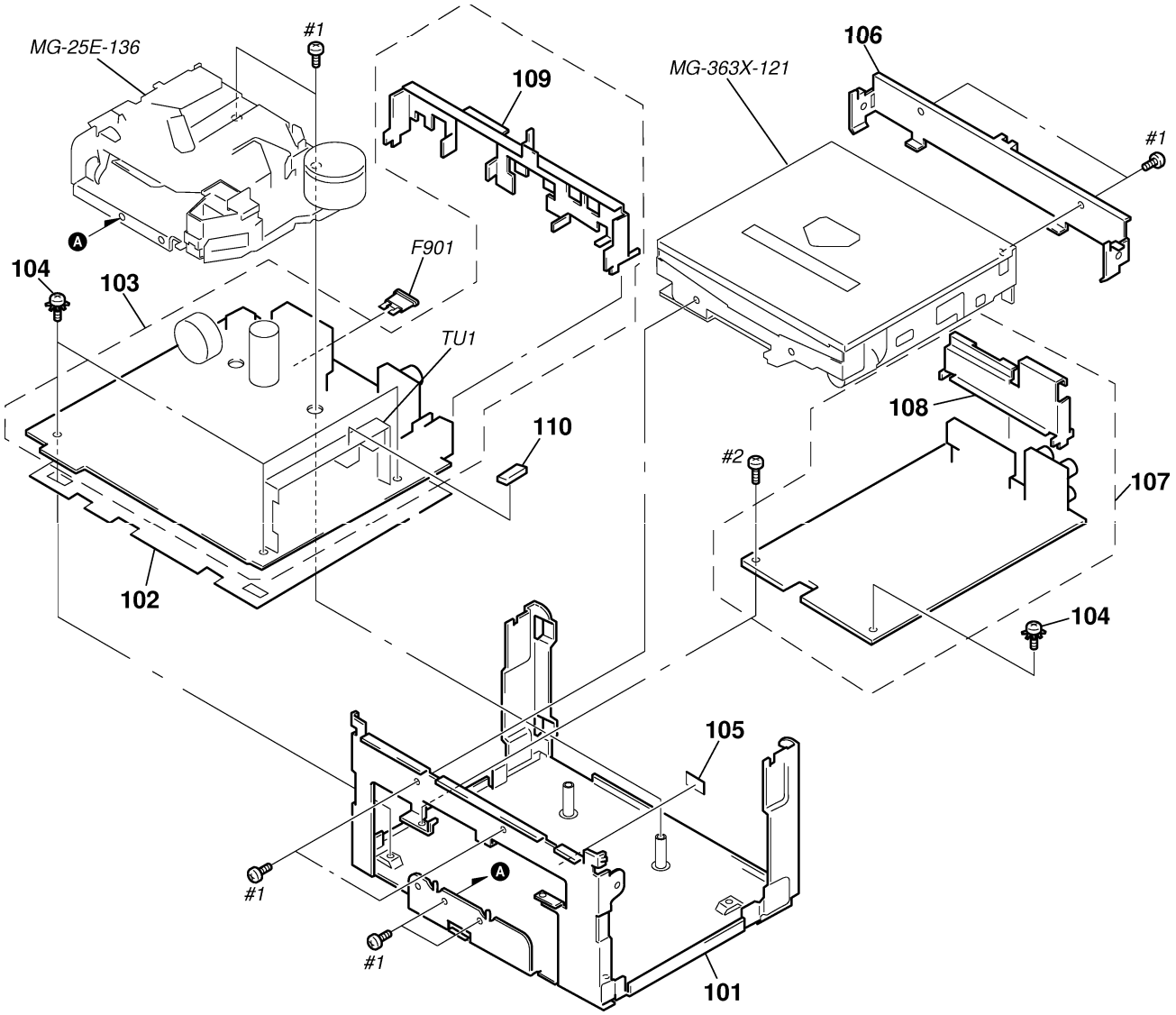
7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-021-889-01	PLATE, TRANSPARENT	
52	3-021-893-01	SHEET, INDICATION	
53	3-736-833-11	EMBLEM (NO.3), SONY	
54	3-012-487-11	BUTTON (TUNE)	
55	3-012-486-11	BUTTON (TAPE)	
56	3-012-485-11	BUTTON (CD)	
57	3-013-018-01	KNOB (VOL)	
58	3-021-891-01	BUTTON (DSPL)	
* 59	A-3313-770-A	KEY BOARD, COMPLETE	
60	3-015-164-01	SHEET (FL), INSULATING	
61	3-014-207-01	SPRING (CASSETTE LID)	
62	3-012-483-01	DOOR, CASSETTE	

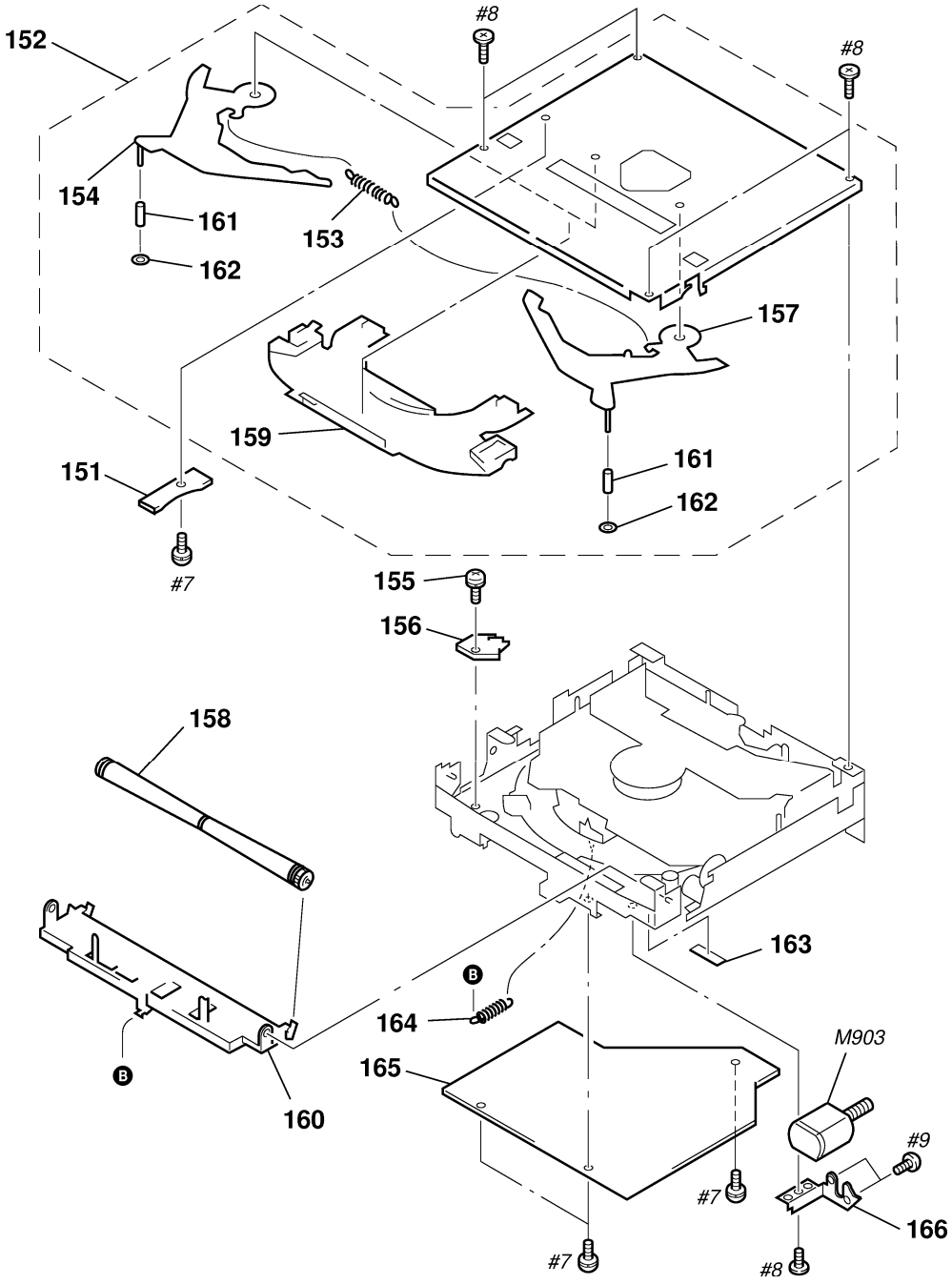
Ref. No.	Part No.	Description	Remark
63	3-012-505-01	KNOB (D-BASS)	
64	3-012-484-01	BUTTON (CD EJECT)	
65	3-012-488-01	BUTTON (10 KEY)	
66	3-012-503-01	PLATE, LIGHT INTERCEPTION	
67	3-021-890-01	BUTTON (PTY)	
68	3-012-521-11	BUTTON (OFF)	
69	X-3374-759-1	FRONT ASSY	
70	3-012-490-11	BUTTON (AMS)	
71	2-127-723-01	SPRING (KNOB)	
72	3-012-520-21	BUTTON (AF/TA)	
FL701	1-517-779-11	INDICATOR TUBE, FLUORESCENT	

7-3. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 101	X-3373-616-1	CHASSIS ASSY	
* 102	3-012-514-01	SHEET, INSULATING	
* 103	A-3313-768-A	MAIN BOARD, COMPLETE	
104	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
* 105	3-320-882-01	SHEET, DIRECTION	
* 106	3-012-512-01	BRACKET (CD)	
107	A-3313-812-A	CD BOARD, COMPLETE	
* 108	3-012-511-01	BRACKET (2F)	
* 109	3-012-509-01	BRACKET (1F)	
110	3-322-044-01	SPACER, RUBBER	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
TU1	A-3282-029-A	TUNER UNIT (TUX-006/2(E))	

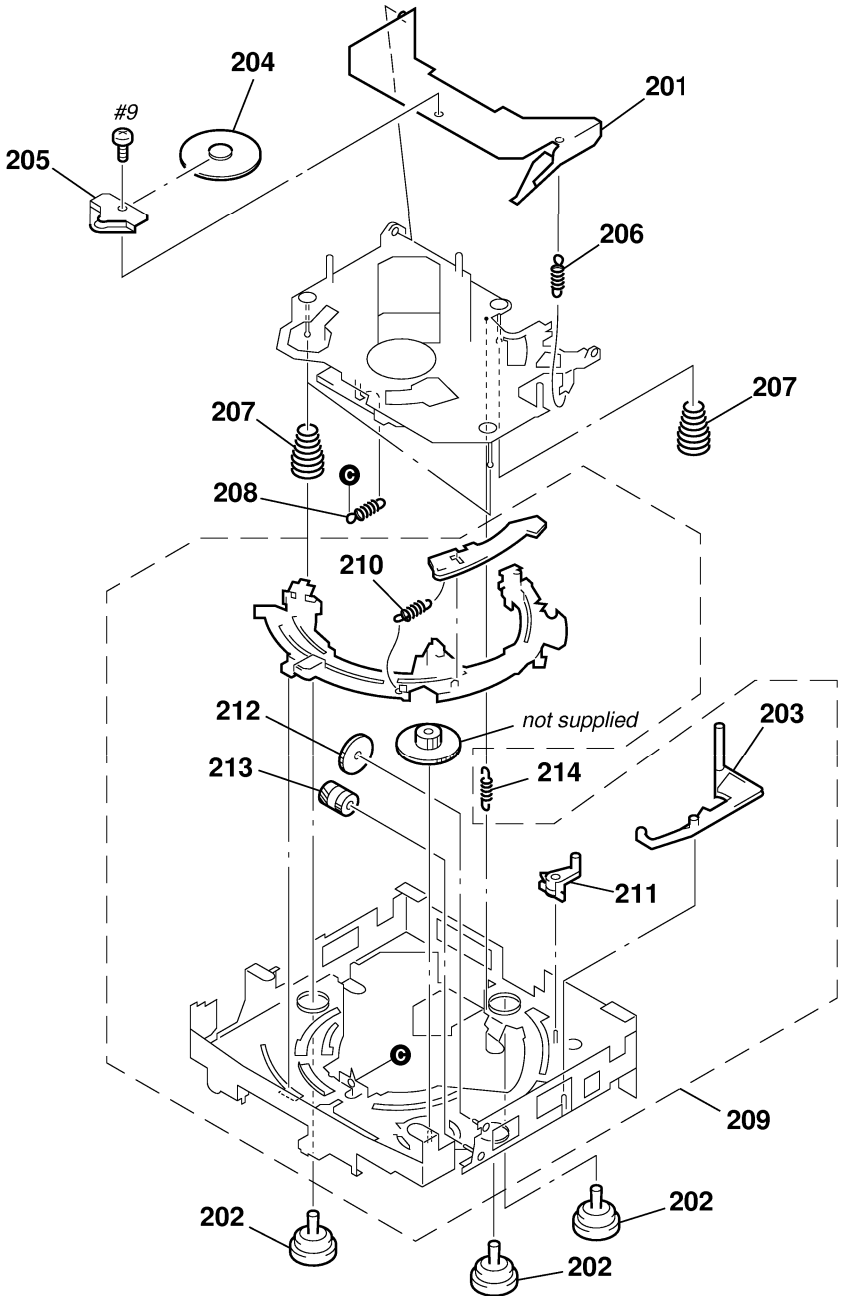
7-4. CD MECHANISM SECTION (1)
(MG-363X-121)



Ref. No.	Part No.	Description	Remark
* 151	1-659-836-11	DISC IN SW BOARD	
* 152	A-3291-816-B	CHASSIS (T) SUB ASSY	
153	3-931-909-01	SPRING (LR), TENSION	
154	X-3371-501-1	LEVER (L) ASSY	
155	3-338-737-01	SCREW (2X3), + PS	
* 156	1-659-837-11	LOAD SW BOARD	
157	X-3371-502-1	LEVER (R) ASSY	
158	A-3301-203-A	ROLLER ASSY	
159	3-931-908-01	GUIDE (DISC)	

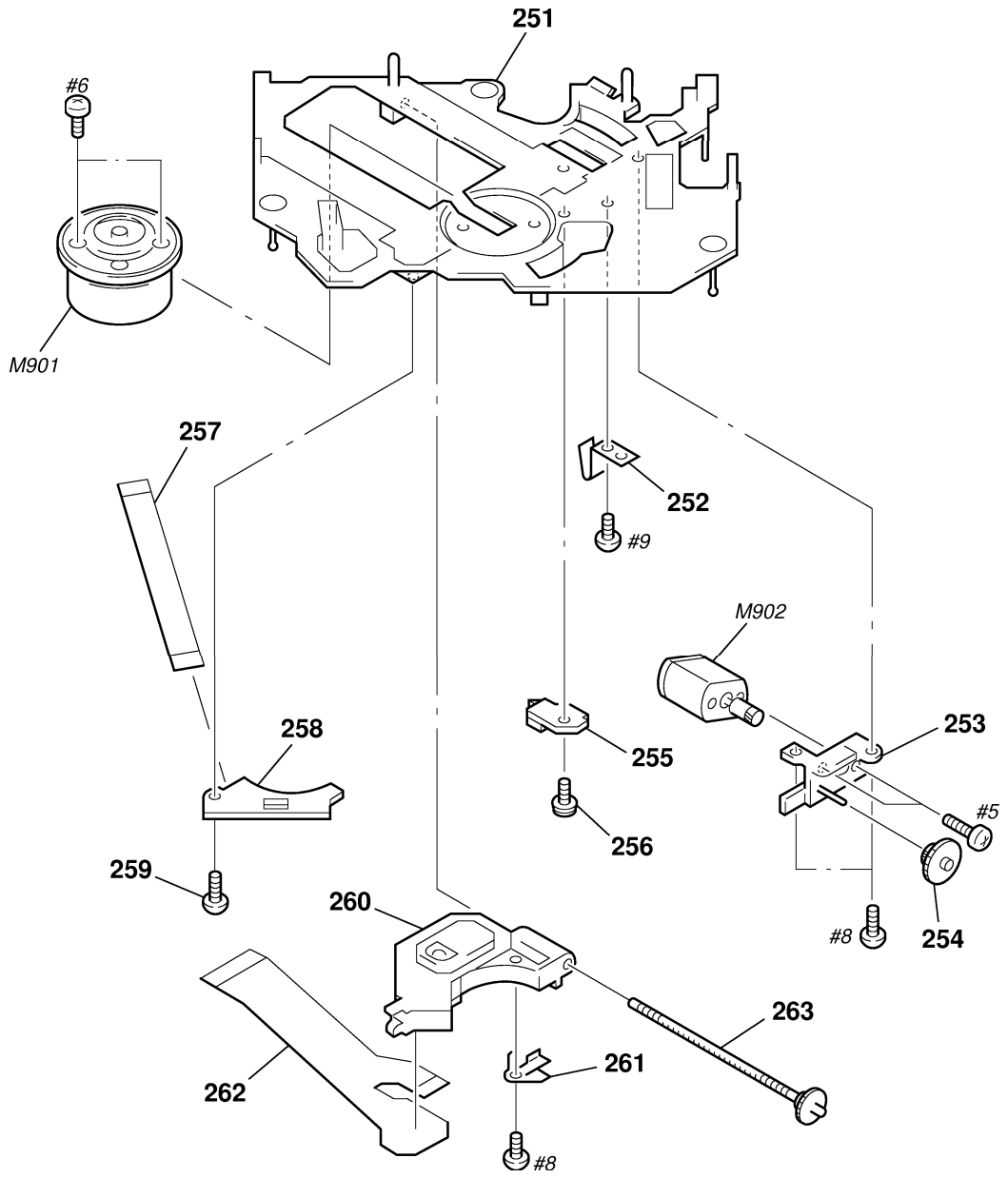
Ref. No.	Part No.	Description	Remark
160	3-931-902-03	ARM (ROLLER)	
161	3-936-756-01	ROLLER (D)	
162	3-321-393-01	WASHER, STOPPER	
* 163	3-939-139-01	SPACER	
164	3-931-916-01	SPRING (RA), TENSION	
* 165	A-3309-227-A	SERVO BOARD, COMPLETE	
* 166	3-007-530-01	BRACKET (MOTOR)	
M903	A-3291-676-A	MOTOR SUB ASSY, LOADING	

7-5. CD MECHANISM SECTION (2)
(MG-363X-121)



Ref. No.	Part No.	Description	Remark
201	3-931-893-01	ARM, CHUCKING	
202	3-931-897-01	DAMPER (T)	
203	3-931-879-02	LEVER (D)	
* 204	3-913-404-11	RETAINER (DISC)	
205	3-931-894-01	BRACKET (CP)	
206	3-931-895-01	SPRING (CH), TENSION	
207	3-931-898-01	SPRING (FL), COMPRESSION	
208	3-019-805-01	SPRING (KF1), TENSION	
209	A-3277-802-C	CHASSIS (M) ASSY	
210	3-931-883-01	SPRING (TR), TENSION	
211	3-931-881-01	LEVER (LOCK)	
212	3-931-882-02	GEAR (MDL)	
213	3-007-537-11	WHEEL (U), WORM	
214	3-019-806-01	SPRING (KR1), TENSION	

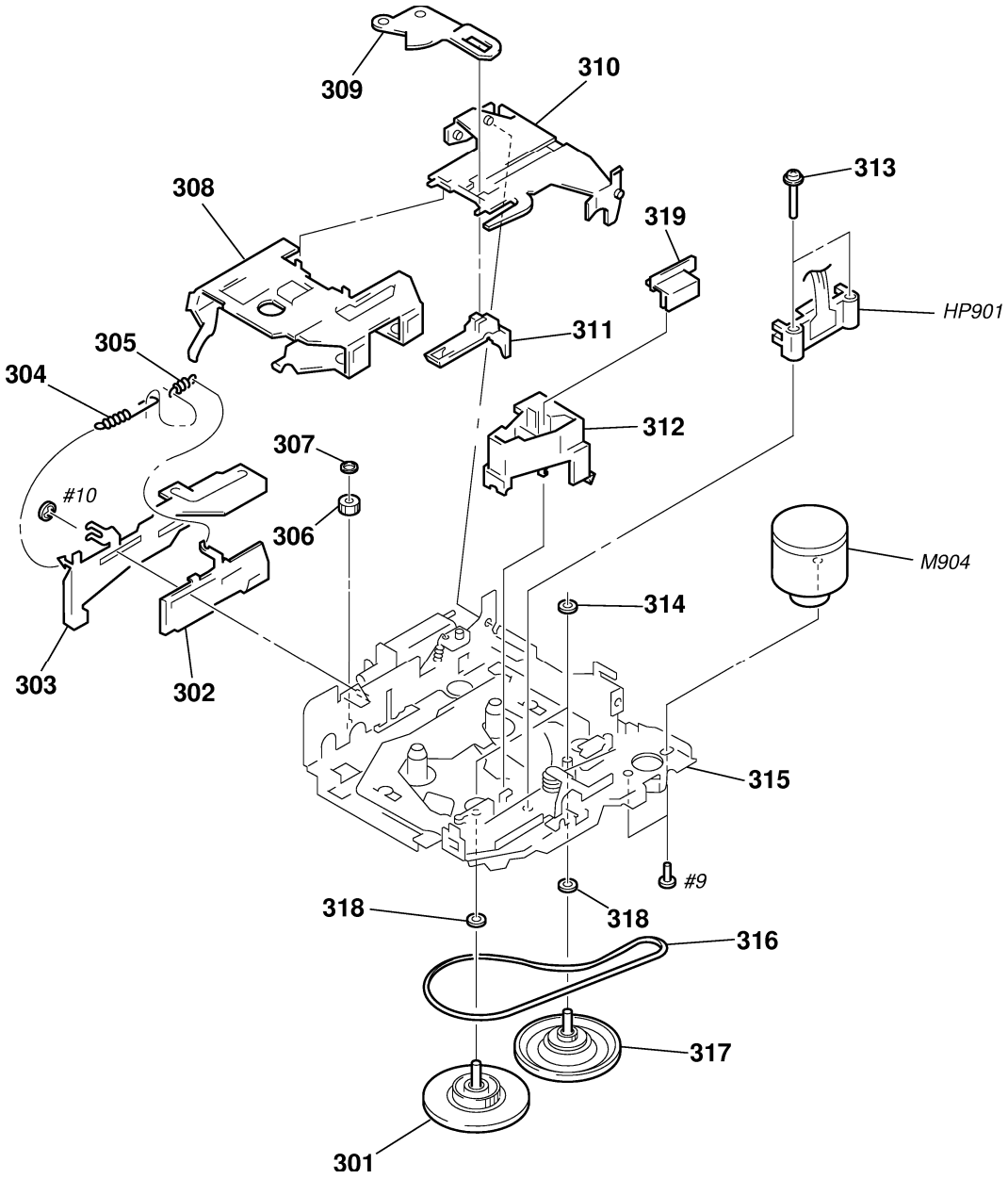
7-6. CD MECHANISM SECTION (3)
(MG-363X-121)



The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
* 251	X-3374-022-1	CHASSIS (OP) (O/S) ASSY	
252	3-931-829-01	SPRING (SL), PLATE	
253	X-3371-504-1	BASE (DRIVING) ASSY	
254	3-931-832-01	GEAR (SL MIDWAY)	
* 255	1-659-835-12	LIMIT SW BOARD	
256	3-338-737-01	SCREW (2X3), + PS	
257	1-659-880-11	MOTOR FLEXIBLE BOARD	
* 258	1-659-834-11	SUB BOARD	
259	3-909-607-01	SCREW	
⚠260	8-820-010-06	PICK-UP, OPTICAL KSS-521A/K1RP	
261	3-931-834-01	SPRING (FEED), PLATE	
262	1-659-881-11	PICK-UP FLEXIBLE BOARD	
263	A-3291-669-A	SHAFT (FEED) ASSY	
M901	X-3371-664-2	MOTOR ASSY (SPINDLE)	
M902	A-3291-674-A	MOTOR ASSY, SLED	

7-7. TAPE MECHANISM SECTION (MG-25E-136)



Ref. No.	Part No.	Description	Remark
301	A-3291-667-A	CLUTCH (FR) ASSY	
* 302	3-019-130-01	LEVER (LDG-A)	
* 303	3-019-131-01	LEVER (LDG-B)	
304	3-020-539-01	SPRING (LD-1), TENSION	
305	3-020-540-01	SPRING (LD-2), TENSION	
306	3-020-542-01	GEAR (LOADING FT)	
307	3-341-753-11	WASHER, POLYETHYLENE	
308	3-020-533-01	HOUSING	
* 309	3-020-532-01	ARM (SUCTION)	
310	3-020-534-01	HANGER	
311	3-933-346-01	CATCHER	

Ref. No.	Part No.	Description	Remark
312	3-933-344-01	GUIDE (C)	
313	3-014-798-01	SCREW (HEAD), SPECIAL	
314	3-364-151-01	WASHER	
315	X-3375-625-1	CHASSIS ASSY (E)	
316	3-017-302-01	BELT (25)	
317	3-936-853-01	FLYWHEEL (F)	
318	3-701-437-21	WASHER	
* 319	3-012-502-01	GUIDE	
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
M904	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	

CD

SECTION 8
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Abbreviation
  G : German model
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : µ, for example:
  uA.. : µA.. uPA.. : µPA..
  uPB.. : µPB.. uPC.. : µPC.. uPD.. : µPD..
- CAPACITORS
  uF : µF
- COILS
  uH : µH

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-3313-812-A	CD BOARD, COMPLETE			
		**********			
*	3-012-511-01	BRACKET (2F)			
		< CAPACITOR >			
C401	1-126-157-11	ELECT	10uF	20%	16V
C402	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C403	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C404	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C405	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C406	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C407	1-104-952-11	ELECT	22uF	20%	16V
C408	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C409	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C411	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C412	1-126-157-11	ELECT	10uF	20%	16V
C413	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C421	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C431	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C432	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C433	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C434	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C441	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C442	1-126-157-11	ELECT	10uF	20%	16V
C446	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C447	1-126-157-11	ELECT	10uF	20%	16V
C451	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C452	1-124-234-00	ELECT	22uF	20%	16V
C455	1-124-584-00	ELECT	100uF	20%	10V
C456	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C461	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C462	1-124-584-00	ELECT	100uF	20%	10V
C463	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C464	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C465	1-124-584-00	ELECT	100uF	20%	10V
C466	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C467	1-126-163-11	ELECT	4.7uF	20%	50V
C468	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C471	1-126-163-11	ELECT	4.7uF	20%	50V
C481	1-126-157-11	ELECT	10uF	20%	16V
C482	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C483	1-124-234-00	ELECT	22uF	20%	16V
C801	1-126-157-11	ELECT	10uF	20%	16V
C802	1-126-157-11	ELECT	10uF	20%	16V
C803	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C804	1-126-301-11	ELECT	1uF	20%	50V
C805	1-104-944-11	ELECT	3.3uF	20%	50V
C806	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C807	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C851	1-126-157-11	ELECT	10uF	20%	16V
C852	1-126-157-11	ELECT	10uF	20%	16V
C853	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C854	1-126-301-11	ELECT	1uF	20%	50V
C855	1-104-944-11	ELECT	3.3uF	20%	50V
C856	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C857	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
		< CONNECTOR >			
CN401	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P			
CN402	1-770-405-11	CONNECTOR, BOARD TO BOARD 8P			
* CN403	1-506-999-11	PIN, CONNECTOR (PC BOARD) 3P			
* CN404	1-564-728-11	PIN, CONNECTOR (SMALL TYPE) 12P			
* CN802	1-564-724-11	PIN, CONNECTOR (SMALL TYPE) 8P			
		< JACK >			
CN803	1-774-699-12	JACK, PIN 4P (LINE OUT)			
		< DIODE >			
D451	8-719-404-49	DIODE MA111			
D461	8-719-422-49	DIODE MA8056-L			
D462	8-719-422-94	DIODE MA8091-L			
D471	8-719-423-10	DIODE MA8100-M-TX			
D481	8-719-421-18	DIODE MA8033-L-TX			
D482	8-719-404-49	DIODE MA111			
D483	8-719-200-82	DIODE 11ES2			
D491	8-719-404-49	DIODE MA111			
D801	8-719-421-36	DIODE MA8036-L			
D851	8-719-421-36	DIODE MA8036-L			
		< IC >			
IC401	8-759-537-65	IC uPD78054GC-484-3B9			
IC801	8-759-464-81	IC PCM1717E-ST2			
IC802	8-759-537-11	IC SM5852FS-E2			
		< JUMPER RESISTOR >			
JC405	1-216-295-00	SHORT	0		
JC406	1-216-295-00	SHORT	0		
JC407	1-216-295-00	SHORT	0		
JC408	1-216-295-00	SHORT	0		

Ref. No.	Part No.	Description			Remark
JC410	1-216-295-00	SHORT	0		
JC412	1-216-295-00	SHORT	0		
JC451	1-216-296-00	SHORT	0		
JC453	1-216-296-00	SHORT	0		
JC454	1-216-296-00	SHORT	0		
JC455	1-216-296-00	SHORT	0		
JC456	1-216-296-00	SHORT	0		
JC457	1-216-295-00	SHORT	0		
		< COIL >			
L401	1-410-513-11	INDUCTOR	22uH		
L402	1-410-513-11	INDUCTOR	22uH		
L411	1-410-513-11	INDUCTOR	22uH		
L455	1-410-513-11	INDUCTOR	22uH		
		< TRANSISTOR >			
Q401	1-801-806-11	TRANSISTOR	DTC144EKA-T146		
Q451	8-729-424-12	TRANSISTOR	UN2112		
Q461	1-801-806-11	TRANSISTOR	DTC144EKA-T146		
Q462	8-729-019-00	TRANSISTOR	2SD2394-G		
Q463	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q464	8-729-019-00	TRANSISTOR	2SD2394-G		
Q465	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q471	8-729-106-60	TRANSISTOR	2SB1115A		
Q472	8-729-421-22	TRANSISTOR	UN2211		
Q473	8-729-019-00	TRANSISTOR	2SD2394-G		
Q474	8-729-020-67	TRANSISTOR	XN1A312-TX		
Q481	8-729-019-00	TRANSISTOR	2SD2394-G		
Q482	8-729-106-60	TRANSISTOR	2SB1115A		
Q483	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q491	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q801	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q802	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q851	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q852	8-729-920-21	TRANSISTOR	DTC314TKH04		
		< RESISTOR >			
R401	1-216-295-00	SHORT	0		
R402	1-216-037-00	METAL CHIP	330	5%	1/10W
R403	1-216-097-00	RES,CHIP	100K	5%	1/10W
R411	1-216-025-00	RES,CHIP	100	5%	1/10W
R412	1-216-025-00	RES,CHIP	100	5%	1/10W
R413	1-216-025-00	RES,CHIP	100	5%	1/10W
R414	1-216-037-00	METAL CHIP	330	5%	1/10W
R431	1-249-437-11	CARBON	47K	5%	1/4W
R432	1-247-807-11	CARBON	100	5%	1/4W
R433	1-247-807-11	CARBON	100	5%	1/4W
R434	1-247-807-11	CARBON	100	5%	1/4W
R441	1-216-089-00	RES,CHIP	47K	5%	1/10W
R442	1-216-097-00	RES,CHIP	100K	5%	1/10W
R444	1-249-437-11	CARBON	47K	5%	1/4W
R445	1-216-089-00	RES,CHIP	47K	5%	1/10W
R446	1-216-105-00	RES,CHIP	220K	5%	1/10W
R447	1-216-001-00	METAL CHIP	10	5%	1/10W
R448	1-216-089-00	RES,CHIP	47K	5%	1/10W
R451	1-216-017-00	RES,CHIP	47	5%	1/10W
R461	1-216-182-00	RES,CHIP	220	5%	1/8W
R462	1-216-188-00	RES,CHIP	390	5%	1/8W
R471	1-216-206-00	RES,CHIP	2.2K	5%	1/8W
R472	1-216-079-00	METAL CHIP	18K	5%	1/10W
R473	1-216-079-00	METAL CHIP	18K	5%	1/10W
R474	1-216-190-00	RES,CHIP	470	5%	1/8W
R475	1-216-190-00	RES,CHIP	470	5%	1/8W
R481	1-249-417-11	CARBON	1K	5%	1/4W
R482	1-216-206-00	RES,CHIP	2.2K	5%	1/8W
R483	1-216-190-00	RES,CHIP	470	5%	1/8W
R484	1-216-049-11	RES,CHIP	1K	5%	1/10W
R485	1-216-049-11	RES,CHIP	1K	5%	1/10W
R491	1-216-089-00	RES,CHIP	47K	5%	1/10W
R492	1-216-097-00	RES,CHIP	100K	5%	1/10W
R801	1-247-815-11	CARBON	220	5%	1/4W
R802	1-247-815-11	CARBON	220	5%	1/4W
R803	1-216-081-00	METAL CHIP	22K	5%	1/10W
R804	1-216-081-00	METAL CHIP	22K	5%	1/10W
R805	1-216-049-11	RES,CHIP	1K	5%	1/10W
R851	1-216-033-00	METAL CHIP	220	5%	1/10W
R852	1-216-033-00	METAL CHIP	220	5%	1/10W
R853	1-216-081-00	METAL CHIP	22K	5%	1/10W
R854	1-216-081-00	METAL CHIP	22K	5%	1/10W
R855	1-216-049-11	RES,CHIP	1K	5%	1/10W
		< VIBRATOR >			
X401	1-579-280-31	VIBRATOR, CRYSTAL (16.9344MHz)			
X402	1-760-489-11	VIBRATOR, CERAMIC (5MHz)			
**********					
*	1-659-836-11	DISC IN SW BOARD			
		**********			
		< SWITCH >			
SW1	1-572-288-11	SWITCH, PUSH (DISC IN)			
SW2	1-572-288-11	SWITCH, PUSH (SELF)			
**********					
*	A-3313-770-A	KEY BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C701	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C702	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C703	1-163-110-00	CERAMIC CHIP	51PF	5%	50V
C704	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C705	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CN701	1-770-983-11	SOCKET, CONNECTOR 8P			

KEY

Ref. No.	Part No.	Description	Remark
CN702	1-784-909-11	CONNECTOR, BOARD TO BOARD 16P	
		< DIODE >	
D701	8-719-977-03	DIODE DTZ5.6B	
D706	8-719-404-49	DIODE MA111	
D713	8-719-975-06	LED CL-70G-CD (⏏ (CD))	
D714	8-719-975-06	LED CL-70G-CD (CD/MD)	
D715	8-719-975-06	LED CL-70G-CD (TAPE ◀II▶)	
D716	8-719-975-06	LED CL-70G-CD (TUNER)	
D730	8-719-975-06	LED CL-70G-CD (TAPE WINDOW)	
D731	8-719-975-06	LED CL-70G-CD (CD WINDOW)	
D732	8-719-059-80	LED CL-170TY-CD-T (DIGITAL)	
D733	8-719-059-80	LED CL-170TY-CD-T (D-BASS)	
D734	8-719-059-80	LED CL-170TY-CD-T (TAPE IN)	
D735	8-719-059-80	LED CL-170TY-CD-T (CD IN)	
D736	8-719-052-72	LED CL-220HR-C (⟶)	
D737	8-719-052-72	LED CL-220HR-C (P MODE)	
D738	8-719-052-72	LED CL-220HR-C (SET UP)	
D739	8-719-052-72	LED CL-220HR-C (⟵)	
D740	8-719-052-72	LED CL-220HR-C (ENTER)	
D741	8-719-052-72	LED CL-220HR-C (SHUF)	
D742	8-719-052-72	LED CL-220HR-C (REP)	
		< FLUORESCENT INDICATOR >	
FL701	1-517-779-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC701	8-759-528-30	IC LC75750EHS	
IC702	8-759-267-27	IC BU2092F	
		< SWITCH >	
LSW701	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (OFF)	
LSW702	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (⏏ (TAPE))	
LSW703	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (10)	
LSW704	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (9)	
LSW705	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (8)	
LSW706	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (7)	
LSW707	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (6)	
LSW708	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (5)	
LSW709	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (4)	
LSW710	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (3)	
LSW711	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (2)	
LSW712	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (1)	
LSW717	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (AF/TA)	
LSW718	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (SHIFT)	
LSW719	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (+ ▶▶ ▶▶I (SEEK/AMS))	
LSW720	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (- ◀◀ I◀◀ (SEEK/AMS))	
LSW721	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (PTY/FILE)	
LSW722	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (SOUND)	
LSW723	1-762-618-11	SWITCH, KEY BOARD (WITH LED) (DSPL)	

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q701	8-729-230-49	TRANSISTOR 2SC2712-YG			
Q702	8-729-904-48	TRANSISTOR DTB113EK			
Q703	8-729-904-48	TRANSISTOR DTB113EK			
Q704	8-729-904-48	TRANSISTOR DTB113EK			
Q705	8-729-904-48	TRANSISTOR DTB113EK			
		< RESISTOR >			
R701	1-216-041-00	METAL CHIP	470	5%	1/10W
R702	1-216-075-00	METAL CHIP	12K	5%	1/10W
R705	1-208-826-11	RES,CHIP	68K	2%	1/10W
R706	1-208-518-61	RES,CHIP	22K	2%	1/10W
R707	1-208-462-61	RES,CHIP	10K	2%	1/10W
R708	1-208-453-61	RES,CHIP	4.7K	2%	1/10W
R715	1-216-045-00	METAL CHIP	680	5%	1/10W
R716	1-216-045-00	METAL CHIP	680	5%	1/10W
R717	1-216-045-00	METAL CHIP	680	5%	1/10W
R718	1-216-045-00	METAL CHIP	680	5%	1/10W
R719	1-216-045-00	METAL CHIP	680	5%	1/10W
R720	1-216-045-00	METAL CHIP	680	5%	1/10W
R721	1-216-045-00	METAL CHIP	680	5%	1/10W
R722	1-216-045-00	METAL CHIP	680	5%	1/10W
R723	1-216-045-00	METAL CHIP	680	5%	1/10W
R724	1-216-045-00	METAL CHIP	680	5%	1/10W
R725	1-216-045-00	METAL CHIP	680	5%	1/10W
R726	1-216-045-00	METAL CHIP	680	5%	1/10W
R727	1-216-045-00	METAL CHIP	680	5%	1/10W
R728	1-216-045-00	METAL CHIP	680	5%	1/10W
R730	1-216-025-00	RES,CHIP	100	5%	1/10W
R731	1-216-025-00	RES,CHIP	100	5%	1/10W
R732	1-216-192-00	METAL CHIP	560	5%	1/8W
R733	1-216-192-00	METAL CHIP	560	5%	1/8W
R734	1-216-192-00	METAL CHIP	560	5%	1/8W
R735	1-216-192-00	METAL CHIP	560	5%	1/8W
R736	1-216-192-00	METAL CHIP	560	5%	1/8W
R737	1-216-192-00	METAL CHIP	560	5%	1/8W
R738	1-216-192-00	METAL CHIP	560	5%	1/8W
R739	1-216-192-00	METAL CHIP	560	5%	1/8W
R740	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R741	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R742	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R743	1-208-437-61	RES,CHIP	1K	2%	1/10W
R744	1-208-441-61	RES,CHIP	1.5K	2%	1/10W
R745	1-208-441-61	RES,CHIP	1.5K	2%	1/10W
R746	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R747	1-208-449-61	RES,CHIP	3.3K	2%	1/10W
R748	1-208-453-61	RES,CHIP	4.7K	2%	1/10W
R749	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R750	1-208-462-61	RES,CHIP	10K	2%	1/10W
R751	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R752	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R753	1-216-647-11	METAL CHIP	680	0.5%	1/10W
R754	1-208-437-61	RES,CHIP	1K	2%	1/10W

Ref. No.	Part No.	Description			Remark
R755	1-208-441-61	RES,CHIP	1.5K	2%	1/10W
R756	1-208-441-61	RES,CHIP	1.5K	2%	1/10W
R757	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R758	1-208-449-61	RES,CHIP	3.3K	2%	1/10W
R759	1-208-453-61	RES,CHIP	4.7K	2%	1/10W
R760	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W
R774	1-216-025-00	RES,CHIP	100	5%	1/10W
R775	1-216-025-00	RES,CHIP	100	5%	1/10W
R776	1-216-031-00	METAL CHIP	180	5%	1/10W
R777	1-216-031-00	METAL CHIP	180	5%	1/10W
R778	1-216-031-00	METAL CHIP	180	5%	1/10W
		< SWITCH >			
SW700	1-762-937-11	SWITCH, ROTARY (D-BASS)			
SW701	1-771-027-11	SWITCH, KEYBOARD (WITH LED) (RESET)			
SW702	1-475-216-11	ENCODER, ROTARY			
SW713	1-771-027-11	SWITCH, KEYBOARD (WITH LED) (⏏ (CD))			
SW714	1-771-027-11	SWITCH, KEYBOARD (WITH LED) (CD/MD)			
SW715	1-771-027-11	SWITCH, KEYBOARD (WITH LED) (TAPE ◄II►)			
SW716	1-771-027-11	SWITCH, KEYBOARD (WITH LED) (TUNER)			
**********					
*	1-659-835-12	LIMIT SW BOARD			
		**********			
		< SWITCH >			
SW3	1-572-688-11	SWITCH, PUSH (1 KEY) (LIMIT)			
**********					
*	1-659-837-11	LOAD SW BOARD			
		**********			
		< SWITCH >			
SW4	1-572-288-11	SWITCH, PUSH (DOWN)			
**********					
*	A-3313-768-A	MAIN BOARD, COMPLETE (INCLUDING SW BOARD)			
		**********			
*	3-012-509-01	BRACKET (1F)			
		< BUZZER >			
BZ591	1-504-920-11	BUZZER			
		< CAPACITOR >			
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C3	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C4	1-124-584-00	ELECT	100uF	20%	10V
C5	1-124-584-00	ELECT	100uF	20%	10V
C6	1-124-584-00	ELECT	100uF	20%	10V
C7	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C8	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C11	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V

Ref. No.	Part No.	Description			Remark
C12	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C13	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C31	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C41	1-137-370-11	FILM	0.01uF	5%	50V
C42	1-137-364-11	FILM	0.001uF	5%	50V
C43	1-115-330-11	FILM	0.22uF	5%	50V
C44	1-115-326-11	FILM	0.1uF	5%	50V
C45	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C46	1-137-370-11	FILM	0.01uF	5%	50V
C47	1-137-366-11	FILM	0.0022uF	5%	50V
C48	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C51	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C52	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C53	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C54	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C55	1-124-229-00	ELECT	33uF	20%	10V
C56	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C57	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C58	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C59	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C60	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C71	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C72	1-124-234-00	ELECT	22uF	20%	16V
C73	1-124-584-00	ELECT	100uF	20%	10V
C74	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C81	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C83	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C84	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C85	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C89	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C90	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C91	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C92	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C93	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C94	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C96	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C101	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C102	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C103	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C104	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C105	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C106	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C107	1-126-159-11	ELECT	0.47uF	20%	50V
C108	1-126-163-11	ELECT	4.7uF	20%	50V
C152	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C153	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C154	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C155	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C163	1-124-257-00	ELECT	2.2uF	20%	50V
C171	1-126-301-11	ELECT	1uF	20%	50V
C172	1-126-157-11	ELECT	10uF	20%	16V
C173	1-115-419-11	CERAMIC CHIP	3300PF	5%	25V
C174	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V

MAIN

Ref. No.	Part No.	Description			Remark
C175	1-126-157-11	ELECT	10uF	20%	16V
C176	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C177	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C178	1-126-157-11	ELECT	10uF	20%	16V
C181	1-126-157-11	ELECT	10uF	20%	16V
C182	1-126-157-11	ELECT	10uF	20%	16V
C183	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C184	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C191	1-163-259-11	CERAMIC CHIP	220PF	5%	50V
C192	1-163-259-11	CERAMIC CHIP	220PF	5%	50V
C201	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C202	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C203	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C204	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C205	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C206	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C207	1-126-159-11	ELECT	0.47uF	20%	50V
C208	1-126-163-11	ELECT	4.7uF	20%	50V
C252	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V
C253	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C254	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C255	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C263	1-124-257-00	ELECT	2.2uF	20%	50V
C271	1-126-301-11	ELECT	1uF	20%	50V
C272	1-126-157-11	ELECT	10uF	20%	16V
C273	1-115-419-11	CERAMIC CHIP	3300PF	5%	25V
C274	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C275	1-126-157-11	ELECT	10uF	20%	16V
C276	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C277	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C278	1-126-157-11	ELECT	10uF	20%	16V
C281	1-126-157-11	ELECT	10uF	20%	16V
C282	1-126-157-11	ELECT	10uF	20%	16V
C283	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C284	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C291	1-163-259-11	CERAMIC CHIP	220PF	5%	50V
C292	1-163-259-11	CERAMIC CHIP	220PF	5%	50V
C301	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C302	1-124-584-00	ELECT	100uF	20%	10V
C303	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C304	1-124-584-00	ELECT	100uF	20%	10V
C305	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C306	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C308	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C309	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C310	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C311	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C313	1-126-163-11	ELECT	4.7uF	20%	50V
C321	1-126-941-11	ELECT	470uF	20%	25V
C322	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C323	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C324	1-126-157-11	ELECT	10uF	20%	16V
C325	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C326	1-124-234-00	ELECT	22uF	20%	16V
C351	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C352	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C353	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C354	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C362	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C363	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C365	1-163-220-11	CERAMIC CHIP	3PF	0.25PF	50V
C371	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C372	1-124-584-00	ELECT	100uF	20%	10V
C373	1-124-234-00	ELECT	22uF	20%	16V
C374	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C391	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C392	1-126-157-11	ELECT	10uF	20%	16V
C393	1-111-233-11	ELECT	5600uF	20%	16V
C394	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C501	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C502	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C515	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C516	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C517	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C528	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C529	1-163-102-11	CERAMIC CHIP	24PF	5%	50V
C530	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C531	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C532	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C533	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C541	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C542	1-124-584-00	ELECT	100uF	20%	10V
C551	1-126-157-11	ELECT	10uF	20%	16V
C552	1-126-157-11	ELECT	10uF	20%	16V
C561	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C562	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C563	1-125-701-11	DOUBLE LAYERS	0.047F		5.5V
C564	1-124-584-00	ELECT	100uF	20%	10V
C565	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C581	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C901	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C902	1-115-326-11	FILM	0.1uF	5%	50V
C903	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C904	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C905	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C906	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C907	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C908	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C909	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C911	1-126-163-11	ELECT	4.7uF	20%	50V
C921	1-126-157-11	ELECT	10uF	20%	16V
C922	1-126-157-11	ELECT	10uF	20%	16V
C923	1-126-157-11	ELECT	10uF	20%	16V
C924	1-124-589-11	ELECT	47uF	20%	16V
C925	1-124-234-00	ELECT	22uF	20%	16V
C926	1-164-005-11	CERAMIC CHIP	0.47uF		25V

Ref. No.	Part No.	Description			Remark
C931	1-124-242-00	ELECT	33uF	20%	25V
C932	1-124-229-00	ELECT	33uF	20%	10V
C933	1-124-229-00	ELECT	33uF	20%	10V
C934	1-126-157-11	ELECT	10uF	20%	16V
C935	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C936	1-126-157-11	ELECT	10uF	20%	16V
C937	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C938	1-124-234-00	ELECT	22uF	20%	16V
C939	1-126-157-11	ELECT	10uF	20%	16V
C941	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C942	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C943	1-126-157-11	ELECT	10uF	20%	16V
C951	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C954	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C971	1-126-163-11	ELECT	4.7uF	20%	50V
		< CONNECTOR >			
CN301	1-766-260-11	CONNECTOR, FFC/FPC (ZIF) 7P			
CN302	1-778-965-21	CONNECTOR 12P			
CN303	1-779-806-21	CONNECTOR 8P			
CN304	1-774-698-11	JACK, PIN 2P (BUS AUDIO IN)			
CN321	1-566-010-11	PIN, CONNECTOR (PC BOARD) 13P			
CN501	1-784-908-11	CONNECTOR, BOARD TO BOARD 16P			
CN900	1-774-701-11	PIN, CONNECTOR 16P			
* CN901	1-506-985-11	PIN, CONNECTOR (PC BOARD) 3P			
CN951	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)			
		< DISCHARGE GAP >			
CP1	1-519-504-11	GAP, DISCHARGE			
		< DIODE >			
D1	8-719-040-04	DIODE MA721WK-(TX)			
D71	8-719-977-03	DIODE DTZ5.6B			
D181	8-719-421-36	DIODE MA8036-L			
D191	8-719-048-98	DIODE RB160L-40TE25			
D192	8-719-048-98	DIODE RB160L-40TE25			
D193	8-719-048-98	DIODE RB160L-40TE25			
D194	8-719-048-98	DIODE RB160L-40TE25			
D281	8-719-421-36	DIODE MA8036-L			
D291	8-719-048-98	DIODE RB160L-40TE25			
D292	8-719-048-98	DIODE RB160L-40TE25			
D293	8-719-048-98	DIODE RB160L-40TE25			
D294	8-719-048-98	DIODE RB160L-40TE25			
D301	8-719-404-49	DIODE MA111			
D321	8-719-200-82	DIODE 11ES2			
D322	8-719-422-97	DIODE MA8091-M			
D323	8-719-404-49	DIODE MA111			
D324	8-719-404-49	DIODE MA111			
D361	8-719-404-49	DIODE MA111			
D561	8-719-404-49	DIODE MA111			
D562	8-719-404-49	DIODE MA111			
D563	8-719-067-56	DIODE MA112-TX			
D564	8-719-067-56	DIODE MA112-TX			

Ref. No.	Part No.	Description	Remark
D565	8-719-400-20	DIODE MA152WA	
D566	8-719-977-12	DIODE DTZ6.8B	
D567	8-719-977-12	DIODE DTZ6.8B	
D568	8-719-404-49	DIODE MA111	
D569	8-719-067-56	DIODE MA112-TX	
D571	8-719-977-12	DIODE DTZ6.8B	
D581	8-719-977-12	DIODE DTZ6.8B	
D582	8-719-977-12	DIODE DTZ6.8B	
D901	8-719-049-38	DIODE 1N5404TU	
D902	8-719-977-04	DIODE DTZ5.6C	
D903	8-719-048-98	DIODE RB160L-40TE25	
D904	8-719-048-98	DIODE RB160L-40TE25	
D905	8-719-057-80	DIODE MA8160-M-TX	
D906	8-719-057-80	DIODE MA8160-M-TX	
D907	8-719-801-78	DIODE 1SS184	
D908	8-719-422-76	DIODE MA8075-M	
D910	8-719-048-98	DIODE RB160L-40TE25	
D921	8-719-404-49	DIODE MA111	
D923	8-719-017-91	DIODE MA8160	
D924	8-719-404-49	DIODE MA111	
D941	8-719-067-56	DIODE MA112-TX	
D951	8-719-057-80	DIODE MA8160-M-TX	
D952	8-719-057-80	DIODE MA8160-M-TX	
D953	8-719-057-80	DIODE MA8160-M-TX	
D954	8-719-017-62	DIODE MA8068-L-TX	
D955	8-719-017-91	DIODE MA8160	
D956	8-719-048-98	DIODE RB160L-40TE25	
D971	8-719-801-78	DIODE 1SS184	
D972	8-719-105-99	DIODE RD6.2M-B1	
		< FUSE >	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
		< IC >	
IC41	8-759-184-64	IC TC4W66FU	
IC51	8-759-448-85	IC BU2624FV-E2	
IC81	8-759-492-59	IC SAA6588T-118	
IC301	8-752-079-79	IC CXA2510AQ-T4	
IC302	8-759-487-82	IC LC75374E	
IC303	8-759-391-88	IC BU4066BCFV-E2	
IC306	8-759-490-48	IC HA13158	
IC321	8-759-823-87	IC LB1638M	
IC501	8-759-537-66	IC MB90574PFV-G-118-BND	
IC561	8-759-461-86	IC RH5VL40AA-T1	
IC562	8-759-495-76	IC RN5VD33AA-TL	
IC901	8-759-347-49	IC BA3918-V2	
IC941	8-759-496-74	IC TA78DL06S	
IC951	8-759-449-89	IC BA8270F-E2	
		< JACK >	
J1	1-764-808-14	JACK (ANTENNA)	
J501	1-566-822-41	JACK (REMOTE IN)	

MAIN

Ref. No.	Part No.	Description		Remark
		< JUMPER RESISTOR >		
JR3	1-216-295-00	SHORT	0	
JR5	1-216-295-00	SHORT	0	
		< COIL >		
L51	1-410-513-11	INDUCTOR	22uH	
L81	1-410-513-11	INDUCTOR	22uH	
L500	1-410-509-11	INDUCTOR	10uH	
L901	1-411-669-12	COIL, CHOKE		
		< EARTH TERMINAL >		
* LUG1	1-537-738-21	TERMINAL, EARTH		
* LUG2	1-537-738-21	TERMINAL, EARTH		
* LUG3	1-537-738-21	TERMINAL, EARTH		
		< THERMISTOR (POSITIVE) >		
PS951	1-801-792-21	THERMISTOR, POSITIVE		
		< TRANSISTOR >		
Q31	8-729-230-49	TRANSISTOR	2SC2712-YG	
Q41	8-729-021-94	FET	2SK1657-T1B	
Q61	8-729-421-22	TRANSISTOR	UN2211	
Q71	8-729-230-49	TRANSISTOR	2SC2712-YG	
Q81	8-729-020-67	TRANSISTOR	XN1A312-TX	
Q82	8-729-230-49	TRANSISTOR	2SC2712-YG	
Q151	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q181	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q182	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q251	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q281	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q282	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q321	8-729-807-12	TRANSISTOR	2SD1802-S	
Q322	8-729-424-08	TRANSISTOR	UN2111	
Q323	8-729-421-22	TRANSISTOR	UN2211	
Q324	8-729-106-60	TRANSISTOR	2SB1115A	
Q325	8-729-421-22	TRANSISTOR	UN2211	
Q351	8-729-421-22	TRANSISTOR	UN2211	
Q352	8-729-230-49	TRANSISTOR	2SC2712-YG	
Q561	8-729-424-08	TRANSISTOR	UN2111	
Q562	8-729-424-08	TRANSISTOR	UN2111	
Q591	8-729-421-22	TRANSISTOR	UN2211	
Q901	8-729-230-49	TRANSISTOR	2SC2712-YG	
Q902	8-729-230-49	TRANSISTOR	2SC2712-YG	
Q903	8-729-021-93	TRANSISTOR	UPA502T-T1	
Q921	8-729-424-08	TRANSISTOR	UN2111	
Q922	8-729-421-22	TRANSISTOR	UN2211	
Q923	8-729-421-22	TRANSISTOR	UN2211	
Q924	8-729-424-12	TRANSISTOR	UN2112	
Q951	8-729-216-22	TRANSISTOR	2SA1162-G	
Q952	8-729-421-22	TRANSISTOR	UN2211	
Q971	8-729-230-49	TRANSISTOR	2SC2712-YG	

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R1	1-216-295-00	SHORT	0		
R2	1-216-049-11	RES,CHIP	1K	5%	1/10W
R3	1-216-037-00	METAL CHIP	330	5%	1/10W
R11	1-216-073-00	METAL CHIP	10K	5%	1/10W
R12	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R13	1-216-073-00	METAL CHIP	10K	5%	1/10W
R14	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R15	1-216-037-00	METAL CHIP	330	5%	1/10W
R16	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R17	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W
R31	1-216-119-00	METAL CHIP	820K	5%	1/10W
R32	1-216-073-00	METAL CHIP	10K	5%	1/10W
R41	1-216-073-00	METAL CHIP	10K	5%	1/10W
R42	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R43	1-216-089-00	RES,CHIP	47K	5%	1/10W
R44	1-216-089-00	RES,CHIP	47K	5%	1/10W
R45	1-216-049-11	RES,CHIP	1K	5%	1/10W
R46	1-216-081-00	METAL CHIP	22K	5%	1/10W
R51	1-216-295-00	SHORT	0		
R52	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R71	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R81	1-216-113-00	METAL CHIP	470K	5%	1/10W
R82	1-216-049-11	RES,CHIP	1K	5%	1/10W
R83	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R85	1-216-041-00	METAL CHIP	470	5%	1/10W
R86	1-216-035-00	METAL CHIP	270	5%	1/10W
R87	1-216-035-00	METAL CHIP	270	5%	1/10W
R88	1-216-001-00	METAL CHIP	10	5%	1/10W
R89	1-216-097-00	RES,CHIP	100K	5%	1/10W
R90	1-216-097-00	RES,CHIP	100K	5%	1/10W
R91	1-216-001-00	METAL CHIP	10	5%	1/10W
R101	1-208-534-61	RES,CHIP	100K	2%	1/10W
R102	1-208-534-61	RES,CHIP	100K	2%	1/10W
R103	1-216-027-00	METAL CHIP	120	5%	1/10W
R104	1-208-812-11	RES,CHIP	18K	2%	1/10W
R105	1-216-677-11	METAL CHIP	12K	0.5%	1/10W
R106	1-218-764-11	RES,CHIP	330K	2%	1/10W
R107	1-216-077-00	METAL CHIP	15K	5%	1/10W
R150	1-216-295-00	SHORT	0		
R151	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R152	1-216-081-00	METAL CHIP	22K	5%	1/10W
R153	1-216-097-00	RES,CHIP	100K	5%	1/10W
R167	1-216-073-00	METAL CHIP	10K	5%	1/10W
R168	1-216-049-11	RES,CHIP	1K	5%	1/10W
R171	1-208-449-41	RES,CHIP	3.3K	2%	1/10W
R181	1-216-033-00	METAL CHIP	220	5%	1/10W
R184	1-216-033-00	METAL CHIP	220	5%	1/10W
R185	1-216-033-00	METAL CHIP	220	5%	1/10W
R186	1-216-081-00	METAL CHIP	22K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R187	1-216-081-00	METAL CHIP	22K	5%	1/10W
R188	1-216-033-00	METAL CHIP	220	5%	1/10W
R191	1-216-085-00	METAL CHIP	33K	5%	1/10W
R192	1-216-085-00	METAL CHIP	33K	5%	1/10W
R201	1-208-534-61	RES,CHIP	100K	2%	1/10W
R202	1-208-534-61	RES,CHIP	100K	2%	1/10W
R203	1-216-027-00	METAL CHIP	120	5%	1/10W
R204	1-208-812-11	RES,CHIP	18K	2%	1/10W
R205	1-216-677-11	METAL CHIP	12K	0.5%	1/10W
R206	1-218-764-11	RES,CHIP	330K	2%	1/10W
R207	1-216-077-00	METAL CHIP	15K	5%	1/10W
R250	1-216-295-00	SHORT	0		
R251	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R252	1-216-081-00	METAL CHIP	22K	5%	1/10W
R253	1-216-097-00	RES,CHIP	100K	5%	1/10W
R267	1-216-073-00	METAL CHIP	10K	5%	1/10W
R268	1-216-049-11	RES,CHIP	1K	5%	1/10W
R271	1-208-449-41	RES,CHIP	3.3K	2%	1/10W
R281	1-216-033-00	METAL CHIP	220	5%	1/10W
R284	1-216-033-00	METAL CHIP	220	5%	1/10W
R285	1-216-033-00	METAL CHIP	220	5%	1/10W
R286	1-216-081-00	METAL CHIP	22K	5%	1/10W
R287	1-216-081-00	METAL CHIP	22K	5%	1/10W
R288	1-216-033-00	METAL CHIP	220	5%	1/10W
R291	1-216-085-00	METAL CHIP	33K	5%	1/10W
R292	1-216-085-00	METAL CHIP	33K	5%	1/10W
R301	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R302	1-208-449-41	RES,CHIP	3.3K	2%	1/10W
R303	1-216-113-00	METAL CHIP	470K	5%	1/10W
R304	1-208-812-11	RES,CHIP	18K	2%	1/10W
R305	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R320	1-216-150-00	RES,CHIP	10	5%	1/8W
R321	1-216-049-11	RES,CHIP	1K	5%	1/10W
R322	1-216-150-00	RES,CHIP	10	5%	1/8W
R323	1-216-150-00	RES,CHIP	10	5%	1/8W
R324	1-216-150-00	RES,CHIP	10	5%	1/8W
R325	1-216-150-00	RES,CHIP	10	5%	1/8W
R326	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R327	1-216-073-00	METAL CHIP	10K	5%	1/10W
R351	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R352	1-216-077-00	METAL CHIP	15K	5%	1/10W
R353	1-216-089-00	RES,CHIP	47K	5%	1/10W
R354	1-216-089-00	RES,CHIP	47K	5%	1/10W
R355	1-216-089-00	RES,CHIP	47K	5%	1/10W
R356	1-216-089-00	RES,CHIP	47K	5%	1/10W
R501	1-216-049-11	RES,CHIP	1K	5%	1/10W
R502	1-216-049-11	RES,CHIP	1K	5%	1/10W
R503	1-216-049-11	RES,CHIP	1K	5%	1/10W
R504	1-216-037-00	METAL CHIP	330	5%	1/10W
R505	1-216-049-11	RES,CHIP	1K	5%	1/10W
R506	1-216-049-11	RES,CHIP	1K	5%	1/10W
R507	1-216-049-11	RES,CHIP	1K	5%	1/10W
R508	1-216-097-00	RES,CHIP	100K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R509	1-216-025-00	RES,CHIP	100	5%	1/10W
R510	1-216-025-00	RES,CHIP	100	5%	1/10W
R511	1-216-025-00	RES,CHIP	100	5%	1/10W
R512	1-216-025-00	RES,CHIP	100	5%	1/10W
R515	1-216-089-00	RES,CHIP	47K	5%	1/10W
R516	1-216-097-00	RES,CHIP	100K	5%	1/10W
R517	1-216-097-00	RES,CHIP	100K	5%	1/10W
R518	1-216-687-11	METAL CHIP	33K	0.5%	1/10W
R519	1-216-295-00	SHORT	0 (AEP,UK)		
R520	1-216-097-00	RES,CHIP	100K	5%	1/10W (G)
R521	1-216-295-00	SHORT	0		
R525	1-216-105-00	RES,CHIP	220K	5%	1/10W
R526	1-216-295-00	SHORT	0		
R527	1-216-089-00	RES,CHIP	47K	5%	1/10W
R528	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R529	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R530	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R531	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R532	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R533	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R534	1-216-295-00	SHORT	0		
R535	1-216-295-00	SHORT	0		
R536	1-216-295-00	SHORT	0		
R537	1-216-295-00	SHORT	0		
R538	1-216-097-00	RES,CHIP	100K	5%	1/10W
R539	1-216-049-11	RES,CHIP	1K	5%	1/10W
R541	1-216-295-00	SHORT	0		
R542	1-216-097-00	RES,CHIP	100K	5%	1/10W
R543	1-216-105-00	RES,CHIP	220K	5%	1/10W
R544	1-216-089-00	RES,CHIP	47K	5%	1/10W
R545	1-216-097-00	RES,CHIP	100K	5%	1/10W
R546	1-216-097-00	RES,CHIP	100K	5%	1/10W
R547	1-216-097-00	RES,CHIP	100K	5%	1/10W
R548	1-216-097-00	RES,CHIP	100K	5%	1/10W
R549	1-216-097-00	RES,CHIP	100K	5%	1/10W
R550	1-216-097-00	RES,CHIP	100K	5%	1/10W
R551	1-216-295-00	SHORT	0		
R552	1-216-295-00	SHORT	0		
R553	1-216-025-00	RES,CHIP	100	5%	1/10W
R554	1-216-025-00	RES,CHIP	100	5%	1/10W
R556	1-216-097-00	RES,CHIP	100K	5%	1/10W
R558	1-216-049-11	RES,CHIP	1K	5%	1/10W
R559	1-216-049-11	RES,CHIP	1K	5%	1/10W
R561	1-216-089-00	RES,CHIP	47K	5%	1/10W
R562	1-216-097-00	RES,CHIP	100K	5%	1/10W
R563	1-216-097-00	RES,CHIP	100K	5%	1/10W
R564	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R565	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R566	1-216-025-00	RES,CHIP	100	5%	1/10W
R567	1-216-025-00	RES,CHIP	100	5%	1/10W
R581	1-216-025-00	RES,CHIP	100	5%	1/10W
R582	1-216-025-00	RES,CHIP	100	5%	1/10W

MAIN **SERVO**

Ref. No.	Part No.	Description			Remark
R583	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R584	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R591	1-216-073-00	METAL CHIP	10K	5%	1/10W
R901	1-216-025-00	RES,CHIP	100	5%	1/10W
R902	1-216-206-00	RES,CHIP	2.2K	5%	1/8W
R903	1-216-085-00	METAL CHIP	33K	5%	1/10W
R904	1-216-073-00	METAL CHIP	10K	5%	1/10W
R905	1-216-073-00	METAL CHIP	10K	5%	1/10W
R911	1-216-089-00	RES,CHIP	47K	5%	1/10W
R912	1-216-089-00	RES,CHIP	47K	5%	1/10W
R913	1-216-085-00	METAL CHIP	33K	5%	1/10W
R921	1-216-041-00	METAL CHIP	470	5%	1/10W
R922	1-216-081-00	METAL CHIP	22K	5%	1/10W
R923	1-216-049-11	RES,CHIP	1K	5%	1/10W
R924	1-216-089-00	RES,CHIP	47K	5%	1/10W
R925	1-216-075-00	METAL CHIP	12K	5%	1/10W
R926	1-216-017-00	RES,CHIP	47	5%	1/10W
R927	1-216-025-00	RES,CHIP	100	5%	1/10W
R928	1-216-295-00	SHORT	0		
R941	1-216-295-00	SHORT	0		
R951	1-208-462-41	RES,CHIP	10K	2%	1/10W
R952	1-216-025-00	RES,CHIP	100	5%	1/10W
R953	1-216-025-00	RES,CHIP	100	5%	1/10W
R954	1-216-089-00	RES,CHIP	47K	5%	1/10W
R955	1-216-073-00	METAL CHIP	10K	5%	1/10W
R956	1-216-224-00	RES,CHIP	12K	5%	1/8W
R958	1-216-295-00	SHORT	0		
R959	1-216-150-00	RES,CHIP	10	5%	1/8W
R971	1-216-206-00	RES,CHIP	2.2K	5%	1/8W
R972	1-216-075-00	METAL CHIP	12K	5%	1/10W
R973	1-216-081-00	METAL CHIP	22K	5%	1/10W
R974	1-216-081-00	METAL CHIP	22K	5%	1/10W
		< VARIABLE RESISTOR >			
RV31	1-238-605-31	RES, ADJ, CARBON	470K		
RV101	1-238-600-11	RES, ADJ, CARBON	10K		
RV201	1-238-600-11	RES, ADJ, CARBON	10K		
		< SWITCH >			
S501	1-571-478-11	SWITCH, SLIDE (POWER SELECT)			
		< TUNER >			
TU1	A-3282-029-A	TUNER UNIT (TUX-006/2(E))			
		< VIBRATOR >			
X51	1-567-848-11	VIBRATOR, CRYSTAL (7.2MHz)			
X81	1-760-556-31	VIBRATOR, CRYSTAL (4.332MHz)			
X501	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X502	1-767-833-21	VIBRATOR, CERAMIC (3.68MHz)			

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Ref. No.	Part No.	Description			Remark
*	A-3309-227-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C2	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C3	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C4	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C6	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C7	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C9	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C10	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C11	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C12	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C13	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C14	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C15	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C16	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C17	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C18	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C19	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C20	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C21	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C22	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C23	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C24	1-163-259-11	CERAMIC CHIP	220PF	5%	50V
C25	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C26	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C27	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C28	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C29	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C30	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C31	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C32	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C33	1-124-779-00	ELECT CHIP	10uF	20%	16V
C34	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C35	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C36	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C37	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C38	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C39	1-126-204-11	ELECT CHIP	47uF	20%	16V
C40	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CN1	1-764-616-12	HOUSING, CONNECTOR (PC BOARD) 30P			
CN2	1-565-728-11	CONNECTOR, FPC 17P			
CN3	1-770-347-21	CONNECTOR, FPC 6P			
		< IC >			
IC1	8-752-372-94	IC CXD2507AQ			
IC2	8-752-074-34	IC CXA1782BQ			
IC3	8-759-354-16	IC BA6796FP-T1			

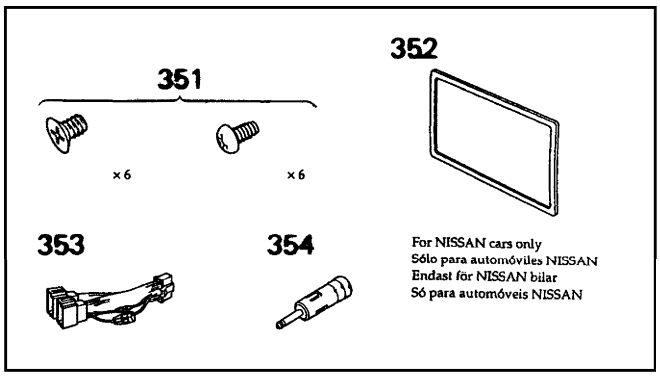
Ref. No.	Part No.	Description		Remark
		< JUMPER RESISTOR >		
JR1	1-216-296-00	SHORT	0	
JR2	1-216-296-00	SHORT	0	
JR3	1-216-296-00	SHORT	0	
JR4	1-216-296-00	SHORT	0	
JR5	1-216-296-00	SHORT	0	
JR6	1-216-296-00	SHORT	0	
JR7	1-216-296-00	SHORT	0	
JR8	1-216-296-00	SHORT	0	
JR9	1-216-296-00	SHORT	0	
JR10	1-216-296-00	SHORT	0	
JR11	1-216-296-00	SHORT	0	
JR12	1-216-296-00	SHORT	0	
JR13	1-216-296-00	SHORT	0	
JR14	1-216-296-00	SHORT	0	
JR15	1-216-296-00	SHORT	0	
JR16	1-216-296-00	SHORT	0	
JR17	1-216-296-00	SHORT	0	
JR18	1-216-296-00	SHORT	0	
JR19	1-216-296-00	SHORT	0	
JR20	1-216-296-00	SHORT	0	
JR21	1-216-296-00	SHORT	0	
JR22	1-216-296-00	SHORT	0	
JR23	1-216-296-00	SHORT	0	
JR24	1-216-296-00	SHORT	0	
JR25	1-216-296-00	SHORT	0	
JR26	1-216-296-00	SHORT	0	
JR27	1-216-296-00	SHORT	0	
JR28	1-216-296-00	SHORT	0	
JR29	1-216-296-00	SHORT	0	
JR30	1-216-296-00	SHORT	0	
JR31	1-216-296-00	SHORT	0	
JR32	1-216-296-00	SHORT	0	
JR33	1-216-296-00	SHORT	0	
JR34	1-216-296-00	SHORT	0	
JR35	1-216-296-00	SHORT	0	
JR36	1-216-296-00	SHORT	0	
JR37	1-216-296-00	SHORT	0	
JR38	1-216-296-00	SHORT	0	
JR39	1-216-296-00	SHORT	0	
JR40	1-216-296-00	SHORT	0	
JR41	1-216-296-00	SHORT	0	
JR43	1-216-296-00	SHORT	0	
JR44	1-216-296-00	SHORT	0	
JR45	1-216-296-00	SHORT	0	
JR46	1-216-296-00	SHORT	0	
		< COIL >		
L1	1-412-058-11	INDUCTOR CHIP	10uH	
L2	1-412-058-11	INDUCTOR CHIP	10uH	
L3	1-412-058-11	INDUCTOR CHIP	10uH	

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q1	8-729-904-60	TRANSISTOR	DTB113ZK		
Q2	8-729-904-86	TRANSISTOR	2SB1197K-Q		
		< RESISTOR >			
R1	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2	1-216-097-00	RES,CHIP	100K	5%	1/10W
R3	1-216-121-00	RES,CHIP	1M	5%	1/10W
R4	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R5	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R6	1-216-073-00	METAL CHIP	10K	5%	1/10W
R7	1-216-009-00	METAL CHIP	22	5%	1/10W
R8	1-216-119-00	METAL CHIP	820K	5%	1/10W
R9	1-216-119-00	METAL CHIP	820K	5%	1/10W
R10	1-216-073-00	METAL CHIP	10K	5%	1/10W
R11	1-216-073-00	METAL CHIP	10K	5%	1/10W
R14	1-216-085-00	METAL CHIP	33K	5%	1/10W
R15	1-216-085-00	METAL CHIP	33K	5%	1/10W
R16	1-216-077-00	METAL CHIP	15K	5%	1/10W
R17	1-216-081-00	METAL CHIP	22K	5%	1/10W
R19	1-216-079-00	METAL CHIP	18K	5%	1/10W
R20	1-216-105-00	RES,CHIP	220K	5%	1/10W
R21	1-216-105-00	RES,CHIP	220K	5%	1/10W
R22	1-216-085-00	METAL CHIP	33K	5%	1/10W
R23	1-216-121-00	RES,CHIP	1M	5%	1/10W
R24	1-216-073-00	METAL CHIP	10K	5%	1/10W
R27	1-216-295-00	SHORT	0		
R28	1-216-101-00	METAL CHIP	150K	5%	1/10W
R29	1-216-097-00	RES,CHIP	100K	5%	1/10W
R30	1-216-097-00	RES,CHIP	100K	5%	1/10W
R31	1-216-081-00	METAL CHIP	22K	5%	1/10W
R32	1-216-109-00	METAL CHIP	330K	5%	1/10W
R33	1-216-105-00	RES,CHIP	220K	5%	1/10W
R34	1-216-009-00	METAL CHIP	22	5%	1/10W
R35	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R36	1-216-097-00	RES,CHIP	100K	5%	1/10W
R37	1-216-117-00	METAL CHIP	680K	5%	1/10W
R38	1-216-109-00	METAL CHIP	330K	5%	1/10W
R39	1-216-101-00	METAL CHIP	150K	5%	1/10W
R40	1-216-114-00	RES,CHIP	510K	5%	1/10W
R41	1-216-093-00	METAL CHIP	68K	5%	1/10W
R42	1-216-103-00	METAL CHIP	180K	5%	1/10W
R43	1-216-097-00	RES,CHIP	100K	5%	1/10W
R44	1-216-085-00	METAL CHIP	33K	5%	1/10W
R45	1-216-081-00	METAL CHIP	22K	5%	1/10W
R46	1-216-097-00	RES,CHIP	100K	5%	1/10W
R47	1-216-105-00	RES,CHIP	220K	5%	1/10W
R48	1-216-073-00	METAL CHIP	10K	5%	1/10W
R49	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R50	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R51	1-216-295-00	SHORT	0		

SERVO **SUB** **SW**

Ref. No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV1	1-238-091-11	RES, ADJ, CERMET 22K	
RV4	1-238-091-11	RES, ADJ, CERMET 22K	
**********			
*	1-659-834-11	SUB BOARD	
		**********	
		< CONNECTOR >	
CN1	1-770-347-21	CONNECTOR, FPC 6P	
**********			
		SW BOARD (SUPPLIED WITH MAIN BOARD, COMPLETE)	
		**********	
		< DIODE >	
D1000	8-719-404-49	DIODE MA111	
		< TRANSISTOR >	
Q1001	8-729-424-18	TRANSISTOR UN2113	
		< RESISTOR >	
R1000	1-216-295-00	SHORT 0	
**********			
		MISCELLANEOUS	
		**********	
2	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	
257	1-659-880-11	MOTOR FLEXIBLE BOARD	
⚠260	8-820-010-06	PICK-UP, OPTICAL KSS-521A/K1RP	
262	1-659-881-11	PICK-UP FLEXIBLE BOARD	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
HP901	1-500-157-21	HEAD, MAGNETIC (PLAYBACK)	
M901	X-3371-664-2	MOTOR ASSY (SPINDLE)	
M902	A-3291-674-A	MOTOR ASSY, SLED	
M903	A-3291-676-A	MOTOR SUB ASSY, LOADING	
M904	A-3291-665-A	MOTOR ASSY, MAIN (CAPSTAN/REEL)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	3-862-805-11	MANUAL, INSTRUCTION (ENGLISH,SPANISH, PORTUGUESE,SWEDISH)	
	3-862-806-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH,PORTUGUESE,SWEDISH)	
	X-3374-605-2	COVER ASSY, FRONT	
**********			

Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#2	7-685-794-09	SCREW +PTT 2.6X10 (S)	
#3	7-685-105-19	TPG +P 2X8, TYPE 2, NON-SLIT	
#4	7-685-796-09	SCREW +PTT 2.6X14 (S)	
#5	7-627-850-28	SCREW, PRECISION +P 1.4X3	
#6	7-627-000-00	SCREW, PRECISION +P 1.7X2.2 TYPE 3	
#7	7-628-253-00	SCREW +PS 2X4	
#8	7-627-553-37	SCREW, PRECISION +P 2X3 TYPE 3	
#9	7-627-553-17	SCREW, PRECISION +P 2X2 TYPE 3	
#10	7-624-104-04	STOP RING 2.0, TYPE -E	
**********			
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
351	X-3375-549-1	SCREW ASSY (6)	
352	3-936-590-01	FRAME (N), ORNAMENT	
353	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	
354	1-465-459-21	ADAPTOR, ANTENNA	



The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety.
Replace only with part number specified.